



Veterans Health Care August 2003

1: Am J Gastroenterol. 2003 May;98(5):1186-92.

Survival of colorectal cancer patients hospitalized in the Veterans Affairs Health Care System.

Rabeneck L, Soucek J, El-Serag HB.

OBJECTIVES: A recent analysis based on data from the Surveillance, Epidemiology, and End Results (SEER) Program of the National Cancer Institute indicates that no survival benefit occurred, for white or for black individuals, in colorectal cancer diagnosed during 1986-1997, and that blacks fared worse than whites. The objective of this research was to evaluate recent temporal trends in the survival of patients with colorectal cancer admitted to hospitals in the Veterans Affairs (VA) system, which offers equal access to care and facilitates systemwide implementation of prevention and treatment services. **METHODS:** This research was a cohort study of patients admitted to all VA hospitals with a new diagnosis of colorectal cancer between October, 1987, and September, 1998, and followed through September, 2001. Temporal changes in observed 5-yr survival were evaluated for the periods 1987-1989, 1990-1992, 1993-1995, and 1996-1998. Cumulative survival was obtained from Kaplan-Meier estimates, whereas adjusted risk of death was calculated using a Cox proportional hazards model. Adjustment was made for differences in patient characteristics, including comorbidity. **RESULTS:** We identified 46,044 individuals with colorectal cancer in VA hospitals during 1987-1998, 98.5% of whom were men. The mean age was 67.7 yr, and the two largest racial/ethnic groups were whites (76.5%) and blacks (17.1%). Significant differences in survival were seen over time ($p < 0.001$, log rank test) with longer survival in patients diagnosed in the more recent time periods. In the multivariable Cox model, survival showed an 18% increase over time (1987-1998) after adjusting for differences in age, race, comorbidity, cancer site, and extent of disease. There was a small but statistically significant decrease in chance of survival in blacks compared with whites (adjusted relative survival 0.96, 95% CI = 0.92-0.99). **CONCLUSIONS:** Recent non-VA studies have shown stable survival for colorectal cancer patients over time, coupled with significantly decreased survival for blacks compared with whites. In contrast, in the VA system, survival has improved for both white and black patients; in addition, the racial discrepancy in survival is markedly attenuated. These results suggest that the benefits of prevention and treatment advances may be more readily achieved in the VA's equal access, integrated health care system.

PMID: 12809847

2: Am J Ophthalmol. 2003 Jul;136(1):68-75.

Indications for and outcomes of penetrating keratoplasty performed by resident surgeons.

Randleman JB, Song CD, Palay DA.

PURPOSE: To analyze the indications for and outcomes of penetrating keratoplasty (PKP) performed by resident surgeons at both county hospital and Veterans Affairs facilities. **DESIGN:** Observational case series. **METHODS:** Retrospective review of 79 eyes from 61 patients undergoing PKP from January 1, 1997, through December 31, 2001, to determine indications for surgery and outcomes, including graft clarity and final visual acuity. **RESULTS:** There were 52 (65.8%) primary and 27 (34.2%) repeat transplants performed. Follow-up after surgery averaged 21.9 months. Indications for PKP included failed graft, 23 (29.1%), bullous keratopathy, 17 (21.5%), keratoconus, 16 (20.3%), corneal scar, 15 (19.0%), corneal perforation from infection, 5 (6.3%), and Fuchs endothelial dystrophy, 3 (3.8%). Twenty-one eyes had pre-existing ocular disease limiting final acuity. Overall, 51 grafts (64.6%) remained clear. More primary than repeat grafts remained clear (75% vs 44.4%, $P = .012$) and achieved 20/40 or better final acuity (30.8% vs 11.8%, $P = .05$). Excluding failed grafts or eyes with limited visual potential, final acuities achieved were: 19 (47.5%) 20/40 or better, 18 (45%) 20/50 to 20/150, 3 (7.5%) 20/200 or worse. Grafts remaining clear by indication were: failed graft, 9 (39.1%); keratoconus, 14 (87.5%); bullous keratopathy, 13 (76.5%); corneal scar, 10 (66.7%); corneal perforation, 2 (40%); Fuchs, 3 (100%). Eyes achieving final acuity of 20/40 or better by indication were: keratoconus, 9 (56.2%); failed graft, 3 (13%); bullous keratopathy, 3 (17.7%); corneal scar, 2 (13.3%); corneal perforation, 0 (0%); Fuchs, 2 (66.7%). **CONCLUSIONS:** County hospital and Veterans Affairs facilities provide a challenging subset of patients for penetrating keratoplasty. Failed graft was the leading indication for transplantation for our population. Graft clarity and final visual acuity varied by indication for transplantation. Resident surgeons can achieve favorable results for penetrating keratoplasty performed at these venues, especially for primary transplants. PMID: 12834672

3: Am J Ophthalmol. 2003 Jul;136(1):1-9.

A comparison of anterior chamber and posterior chamber intraocular lenses after vitreous presentation during cataract surgery: the Department of Veterans Affairs Cooperative Cataract Study.

Collins JF, Gaster RN, Krol WF, Colling CL, Kirk GF, Smith TJ; Department of Veterans Affairs Cooperative Cataract Study.

PURPOSE: To compare the efficacy and safety of anterior chamber (AC) intraocular lenses (IOLs) and posterior chamber (PC) IOLs implanted after vitreous presentation during extracapsular cataract extraction (ECCE). **DESIGN:** The study was a prospective, long-term, randomized clinical trial conducted at 19 Department of Veterans Affairs medical centers across the United States. **METHODS:** There were 438 eyes (438 patients) that met preliminary eligibility criteria, suffered vitreous presentation during ECCE (phacoemulsification or classical extracapsular technique), and had sufficient capsular support for a PC IOL without sutures after anterior vitrectomy randomized to either a PC IOL (230 patients) or an AC IOL (208 patients). Patients were examined at 3, 6, and 12 months post-surgery and yearly thereafter. Minimum follow-up was 1 year. The primary outcome measure of best-corrected visual acuity at 1 year was obtained by a masked certified examiner. **RESULTS:** More PC IOL patients (91%) achieved visual acuity of 20/40 or better at 1 year than AC IOL patients (79%), a highly significant difference ($P = .003$). There was no significant difference between the two groups for patient's rating of vision or adverse events. Over 84% of the PC IOL patients and over 77% of the AC IOL patients rated their vision as good or better at 1 year as opposed to only 7% giving such ratings before surgery. For at least one rating period during the first year, 13.2% of the combined study patients had cystoid macular edema, 8.5% had

posterior capsule opacification, 5.7% had glaucoma, and 3.7% had retinal detachment. CONCLUSION: In the presence of sufficient capsular support, a PC IOL should be implanted after vitreous presentation during ECCE.
PMID: 12834663

4: Crit Care Med. 2003 Jun;31(6):1638-46.

Automated intensive care unit risk adjustment: results from a National Veterans Affairs study.

Render ML, Kim HM, Welsh DE, Timmons S, Johnston J, Hui S, Connors AF Jr, Wagner

D, Daley J, Hofer TP; VA ICU Project (VIP) Investigators.

CONTEXT: Comparison of outcome among intensive care units (ICUs) requires risk adjustment for differences in severity of illness and risk of death at admission to the ICU, historically obtained by costly chart review and manual data entry. OBJECTIVE: To accurately estimate patient risk of death in the ICU using data easily available in hospital electronic databases to permit automation. DESIGN AND SETTING: Cohort study to develop and validate a model to predict mortality at hospital discharge using multivariate logistic regression with a split derivation (17,731) and validation (11,646) sample formed from 29,377 consecutive first ICU admissions to medical, cardiac, and surgical ICUs in 17 Veterans' Health Administration hospitals between February 1996 and July 1997. MAIN OUTCOME MEASURES: Mortality at hospital discharge adjusted for age, laboratory data, diagnosis, source of ICU admission, and comorbid illness. RESULTS: The overall hospital death rate was 11.3%. In the validation sample, the model separated well between survivors and nonsurvivors (area under the receiver operating characteristic curve = 0.885). Examination of the observed vs. the predicted mortality across the range of mortality showed the model was well calibrated. CONCLUSIONS: Automation could broaden access to risk adjustment of ICU outcomes with only a small trade-off in discrimination. Broader use might promote valid evaluation of ICU outcomes, encouraging effective practices and improving ICU quality.

PMID: 12794398

5: Hosp Health Netw. 2003 May;77(5):54-6, 2.

Bar code bandwagon.

Haugh R.

The Food and Drug Administration issued a proposed rule in March requiring bar codes on all medications. Most expect that the technology will be commonplace in hospitals before the FDA's three-year window. A handful of systems are leading the way.

PMID: 12789893

6: J AHIMA. 2001 Apr;72(4):60-1.

VA program bridges skills gap, improves performance.

Zangl-Milbrand E.

PMID: 12809137

7: J Am Coll Surg. 2003 Jun;196(6):911-8.

"To Err Is Human": uniformly reporting medical errors and near misses, a naive, costly, and misdirected goal.

Andrus CH, Villasenor EG, Kettelle JB, Roth R, Sweeney AM, Matolo NM.

PMID: 12788428

8: J Am Med Dir Assoc. 2003 Jan-Feb;4(1):9-15.

Comment in:

J Am Med Dir Assoc. 2003 Jan-Feb;4(1):50-1.

Development and psychometric evaluation of the Pain Assessment in Advanced Dementia (PAINAD) scale.

Warden V, Hurley AC, Volicer L.

OBJECTIVES: To develop a clinically relevant and easy to use pain assessment tool for individuals with advanced dementia that has adequate psychometric properties.

DESIGN: Instrument development study using expert clinicians and behavioral observation methods. Measurement of sensitivity of the instrument to detect the effects of analgesic medications in a quality improvement activity. **SETTING:**

Inpatient dementia special care units in a Veterans Administration Medical Center.

Participants: Nineteen residents with advanced dementia who were aphasic or lacked the ability to report their degree of pain and six professional staff members.

Additionally, data from medical records of 25 residents who were receiving pain medications as required (PRN) were collected. **Measurements:** Based on the

literature review, related assessment tools and consultation with expert clinicians, a five-item observational tool with a range of 0 to 10 was developed. The tool, Pain Assessment in Advanced Dementia (PAINAD), was compared with the Discomfort Scale and two visual analog scales (discomfort and pain) by trained raters/expert clinicians in the development study, and used for detection of analgesic efficacy in a quality improvement activity. **RESULTS:** Adequate levels of interrater reliability were

achieved between dyads of the principal investigator with each clinical research rater and between two raters. PAINAD had satisfactory reliability by internal consistency with a one factor solution. PAINADthe Discomfort Scale-Dementia of Alzheimer Type (DS-DAT) were significantly correlated, providing evidence of construct validity.

PAINAD detected statistically significant difference between scores obtained before and after receiving a pain medication. **CONCLUSIONS:** The PAINAD is a simple, valid, and reliable instrument for measurement of pain in noncommunicative patients.

Since the patient population used for its development and testing was limited to a relatively small number of males, further research is needed before it can be universally recommended.

PMID: 12807591

9: J Gerontol A Biol Sci Med Sci. 2003 Jun;58(6):566-72.

Communication between identical twins: health behavior and social factors are associated with longevity that is greater among identical than fraternal U.S. World War II veteran twins.

Zaretsky MD.

BACKGROUND: Longevity is greater for identical twins than for fraternal twins from the same population. Factors that are explanatory for this difference are not known.

METHODS: Multivariate survival analysis is applied to current mortality data for 26,974 male twins with known zygosity of the National Academy of Science-National Research Council World War II Veteran Twins Registry, and this analysis is applied to their health and social behavior and personal histories, as collected from two survey questionnaires distributed in 1967 and 1983 (with 14,300 and 9475 responses received, respectively). To explain this difference in longevity, social, health, and personal history factors are evaluated for associations with longevity.

RESULTS: Survival functions of identical and fraternal twins differed significantly ($p < .0001$). Median lifetimes were 82 years for identical and 80.5 years for fraternal twins. The correlation between lifetimes of identical twin partners was greater than

that of fraternal twins. For identical but not for fraternal twins, the risk of mortality was significantly lower for twin partners who communicated 1 or more times per month, compared with those who communicated less frequently (relative risk.80, 95% confidence interval 0.68-0.94, $p=.008$, with control for other factors associated with longevity: smoking, exercise, a current marriage, living with both parents until age 15 or older, and having a live co-twin). Distributions of communication, exercise level, and smoking prevalence were more beneficial with regard to longevity for identical than for fraternal twins as a group. CONCLUSIONS: Frequent communication between identical but not fraternal twin partners, and both level of exercise and prevalence of smoking, distributed more beneficially in terms of longevity for identical compared with fraternal twins, are explanatory for the greater longevity of identical than fraternal twins.
PMID: 12807930

10: J Healthc Qual. 2003 May-Jun;25(3):33-9.

Achieving excellence in veterans healthcare--a balanced scorecard approach.
Biro LA, Moreland ME, Cowgill DE.

This article provides healthcare administrators and managers with a framework and model for developing a balanced scorecard and demonstrates the remarkable success of this process, which brings focus to leadership decisions about the allocation of resources. This scorecard was developed as a top management tool designed to structure multiple priorities of a large, complex, integrated healthcare system and to establish benchmarks to measure success in achieving targets for performance in identified areas. Significant benefits and positive results were derived from the implementation of the balanced scorecard, based upon benchmarks considered to be critical success factors. The network's chief executive officer and top leadership team set and articulated the network's primary operating principles: quality and efficiency in the provision of comprehensive healthcare and support services. Under the weighted benchmarks of the balanced scorecard, the facilities in the network were mandated to adhere to one non-negotiable tenet: providing care that is second to none. The balanced scorecard approach to leadership continuously ensures that this is the primary goal and focal point for all activity within the network. To that end, systems are always in place to ensure that the network is fully successful on all performance measures relating to quality.

PMID: 12774646 [PubMed - indexed for MEDLINE]

11: J Nerv Ment Dis. 2003 May;191(5):332-8.

Mixed lateral preference and parental left-handedness: possible markers of risk for PTSD.

Chemtob CM, Taylor KB.

Degree of lateral preference (mixed versus consistent), family history of parental left-handedness, and presence of posttraumatic stress disorder (PTSD) were measured in 118 right-handed male U.S. combat veterans. Right-handed participants with mixed lateral preference were more likely to have PTSD than were right-handers with consistent lateral preference. Respondents reporting a left-handed parent were also more likely to have PTSD. Finally, there was a significant difference in the proportion of participants with PTSD for three groups: participants with parental left-handedness and mixed lateral preference (100% PTSD), participants with parental left-handedness or mixed lateral preference (70% PTSD), and participants with neither parental left-handedness nor mixed lateral preference (44% PTSD). These findings suggest the possible usefulness of further examining the relationship between mixed lateral preference, parental left-handedness, and other possible indicators of risk for PTSD.

PMID: 12819553

12: Law Hum Behav. 2003 Jun;27(3):289-98.

Elevated risk of arrest for Veteran's Administration behavioral health service recipients in four Florida counties.

Pandiani JA, Rosenheck R, Banks SM.

This paper examines the relative contribution of mental and substance abuse disorders to criminal justice involvement by examining the relative risk of arrest for three groups of adult male recipients of VA behavioral health care services. These groups include men served for both substance abuse and mental health, for only substance abuse, and for only mental health. The relative risk of multiple offences is compared to relative risk of a single offense for each group. Results indicated that relative risk of multiple arrests for the dual diagnosis group is substantially greater than for either of the single diagnosis groups, and greater than the relative risk for recipients of nonbehavioral health services. Relative risk of arrest for recipients of only mental health services is no different than the relative risk for other veterans living in the region under examination.

PMID: 12794965

13: Med Care. 2003 Jun;41(6 Suppl):II103-10.

Applying the 3M All Patient Refined Diagnosis Related Groups Grouper to measure inpatient severity in the VA.

Shen Y.

OBJECTIVES: To assess the severity level of acute inpatient care in the Veterans Health Administration (VA) using the 3M All Patient Refined Diagnosis Related Groups (APR-DRGs) Grouper and compare severity levels in the six study sites with other Veterans Affairs Medical Centers. **METHODS:** Acute inpatient stays were generated based on bedsection movement information in VA Inpatient Medical SAS data sets from federal fiscal years 1997 and 1998. All nonacute bedsections were excluded. The APR-DRG Grouper generated APR-DRG and severity level for each acute inpatient stay using relevant VA data in a fixed format. Severity and length of stay (LOS) within each major APR-DRG (those accounting for at least 0.5% of all acute inpatient stays or days) were compared between study sites and other centers using z scores. **RESULTS:** Of 315 APR-DRGs, 63 major groups accounted for more than two thirds of all stays and days of care in both years. The study sites were similar in average patient severity and LOS to other centers for most APR-DRGs. For those with significant differences, the six centers had shorter LOS and higher severity. The magnitude of differences was large in LOS and small in severity. **CONCLUSIONS:** The study sites are generally representative of the overall VA acute inpatient stays. Some adjustments were needed to reflect that the six sites had relatively sicker patients and lower LOS in some of APR-DRGs when resource utilization estimations in the six sites were generalized to the entire VA system. The severity measure of the 3M APR-DRG Grouper can be adapted to the VA controlling for the complicated nature of VA inpatient care.

PMID: 12773832

14: Med Care. 2003 Jun;41(6 Suppl):II111-7.

Evaluating VA patient-level expenditures: decision support system estimates and Medicare rates.

Hendricks AM, Lotchin TR, Hutterer J, Swanson J, Kenneally K; Decision Support System Cost Evaluation Work Group.

OBJECTIVES: To make preliminary comparisons of Veterans Health Administration (VA) Decision Support System (DSS) patient-level cost information with Medicare allowable reimbursements. **METHODS:** For six VA facilities in the Evaluating VA Costs study for federal fiscal year 1999, DSS cost estimates for outpatient inguinal hernia and cataract operations and inpatient stays for chronic obstructive pulmonary disease, simple pneumonia, diabetes, and detoxification were compared with Medicare allowable reimbursement amounts for the same procedures and diagnosis-related groups. Medicare average base payments were adjusted for disproportionate share, capital, and indirect medical education costs. The amounts include Medicare's geographic adjustments for wages and capital. Medicare professional fees were a weighted average of site-specific fees paid for the indicated procedure. **RESULTS:** For the chosen types of care in fiscal year 1999, average DSS cost estimates were generally higher than estimated Medicare allowable reimbursement amounts, but included different amounts of professional services per discharge or outpatient procedure. The difference was greatest for inguinal hernia repair (\$3253 US dollars compared with \$1506 US dollars). Two diagnosis-related groups for detoxification (434 and 435) were least comparable between the systems because some VA discharges undoubtedly included both acute and nonacute portions of the hospitalizations, whereas the Medicare rates are for acute stays only. **CONCLUSIONS:** Researchers and managers need DSS detail records to make any meaningful comparisons of the VA's DSS costs and non-VA reimbursement amounts such as those of Medicare. Non-VA reimbursement estimates should include an average of all professional services, including those of anesthesiologists and consultants. Separating acute and nonacute bedsections in DSS data would improve the VA's capability for comparison. Current information is insufficient for make or buy decisions.

PMID: 12773833

15: Med Care. 2003 Jun;41(6):753-60.

Predicting costs of care using a pharmacy-based measure risk adjustment in a veteran population.

Sales AE, Liu CF, Sloan KL, Malkin J, Fishman PA, Rosen AK, Loveland S, Paul Nichol W, Suzuki NT, Perrin E, Sharp ND, Todd-Stenberg J.

BACKGROUND: Although most widely used risk adjustment systems use diagnosis data to classify patients, there is growing interest in risk adjustment based on computerized pharmacy data. The Veterans Health Administration (VHA) is an ideal environment in which to test the efficacy of a pharmacy-based approach.

OBJECTIVE: To examine the ability of RxRisk-V to predict concurrent and prospective costs of care in VHA and compare the performance of RxRisk-V to a simple age/gender model, the original RxRisk, and two leading diagnosis-based risk adjustment approaches: Adjusted Clinical Groups and Diagnostic Cost

Groups/Hierarchical Condition Categories. **METHODS:** The study population consisted of 161,202 users of VHA services in Washington, Oregon, Idaho, and Alaska during fiscal years (FY) 1996 to 1998. We examined both concurrent and predictive model fit for two sequential 12-month periods (FY 98 and FY 99) with the patient-year as the unit of analysis, using split-half validation. **RESULTS:** Our results show that the Diagnostic Cost Group /Hierarchical Condition Categories model performs best ($R^2 = 0.45$) among concurrent cost models, followed by ADG (0.31), RxRisk-V (0.20), and age/sex model (0.01). However, prospective cost models other than age/sex showed comparable R^2 : Diagnostic Cost Group /Hierarchical Condition Categories $R^2 = 0.15$, followed by ADG (0.12), RxRisk-V (0.12), and age/sex (0.01). **CONCLUSIONS:**

RxRisk-V is a clinically relevant, open source risk adjustment system that is easily tailored to fit specific questions, populations, or needs. Although it does not perform better than diagnosis-based measures available on the market, it may provide a

reasonable alternative to proprietary systems where accurate computerized pharmacy data are available.
PMID: 12773841

16: Med Care. 2003 Jun;41(6):761-74.

Construction and characteristics of the RxRisk-V: a VA-adapted pharmacy-based case-mix instrument.

Sloan KL, Sales AE, Liu CF, Fishman P, Nichol P, Suzuki NT, Sharp ND.

BACKGROUND: Assessment of disease burden is the key to many aspects of health care management. Patient diagnoses are commonly used for case-mix assessment. However, issues pertaining to diagnostic data availability and reliability make pharmacy-based strategies attractive. Our goal was to provide a reliable and valid pharmacy-based case-mix classification system for chronic diseases found in the Veterans Health Administration (VHA) population. OBJECTIVE: To detail the development and category definitions of a VA-adapted version of the RxRisk (formerly the Chronic Disease Score); to describe category prevalence and reliability; to check category criterion validity against ICD-9 diagnoses; and to assess category-specific regression coefficients in concurrent and prospective cost models. RESEARCH DESIGN: Clinical and pharmacological review followed by cohort analysis of diagnostic, pharmacy, and utilization databases. SUBJECTS: 126,075 veteran users of VHA services in Washington, Oregon, Idaho, and Alaska. METHODS: We used Kappa statistics to evaluate RxRisk category reliability and criterion validity, and multivariate regression to estimate concurrent and prospective cost models. RESULTS: The RxRisk-V classified 70.5% of the VHA Northwest Network 1998 users into an average of 2.61 categories. Of the 45 classes, 33 classes had good-excellent 1-year reliability and 25 classes had good-excellent criterion validity against ICD-9 diagnoses. The RxRisk-V accounts for a distinct proportion of the variance in concurrent ($R^2 = 0.18$) and prospective cost ($R^2 = 0.10$) models. CONCLUSIONS: The RxRisk-V provides a reliable and valid method for administrators to describe and understand better chronic disease burden of their treated populations. Tailoring to the VHA permits assessment of disease burden specific to this population.
PMID: 12773842

17: Med Care. 2003 Jun;41(6 Suppl):II91-102.

Applying diagnostic cost groups to examine the disease burden of VA facilities: comparing the six "Evaluating VA Costs" study sites with other VA sites and Medicare.

Rosen AK, Loveland S, Anderson JJ.

OBJECTIVES: To compare the disease burden of Veterans Health Administration (VA) patients at six study sites with all other VA patients and the Medicare population. DESIGN: A 60% random sample of all VA veteran patients during federal fiscal year 1997 was obtained from administrative databases. A split-sample technique provided a 40% sample ($n = 1,046,803$) for development and a 20% sample ($n = 524,461$) for validation. We selected the six study sites from the 40% sample, yielding a total of 50,080 patients in those sites. METHODS: We used Diagnostic Cost Groups to classify patients into clinical groupings based on age, gender, and International Classification of Diseases, Ninth Revision, Clinical Modification diagnoses. The Diagnostic Cost Group model produces relative risk scores that describe patients' expected resource use normalized to the Medicare population. We compared the severity of the six sites with each other and with all other VA facilities and the severity of VA patients with that of Medicare beneficiaries. RESULTS: There were minor statistically significant differences between the study sites and all other VA facilities. Compared with the Medicare population, VA's population was younger and

had lower expected resource use (relative risk scores were 1.0 and 0.76, respectively). CONCLUSIONS: Disease burden of the six study sites is representative of all other VA facilities. Although lower relative risk scores suggest that VA patients are healthier than Medicare beneficiaries, when age is taken into account, scores are more comparable. Interpreting the expected resource utilization of the VA population against other benchmarks should be performed carefully.
PMID: 12773831

18: Med Care. 2003 Jun;41(6 Suppl):II80-90.

Using the cost distribution report in estimating private sector payments: what adjustments should researchers make?

Nugent G, Grippen G, Parris YC, Mitchell M.

OBJECTIVES: To reapportion Veterans Health Administration (VA) annual expenditures into benefit categories for comparison with estimated payments by private sector providers. METHODS: Total expenditures for six VA medical centers for federal fiscal year 1999 were reapportioned by benefit category using the cost distribution report (CDR). Health benefit categories were based on those of health care insurers. Cost reapportionment was based on CDR data and reviews of source accounting and payroll documents. RESULTS: Actual expenditures for many benefits can be accurately identified and reapportioned using CDR data, but other expenditures were not identifiable in the CDR and required inspection of source documents. Inpatient expenditures amounting to \$75,110,094 US dollars and outpatient expenditures amounting to \$73,594,284 US dollars were reapportioned into other benefit categories, primarily professional fees. Expenditures for some VA benefits could not be identified because of differences in accounting and clinical practice between the VA and the community. DISCUSSION: Revisions to bring the CDR more in line with private sector payment categories would improve effectiveness for internal VA analyses and external expenditure comparisons. CDR revisions would require changes in recording some clinical workload (eg, rehabilitation and extended care) and classifying residential and domiciliary programs separate from inpatient care. Benefits that were not assigned expenditures for comparison with payments represent a potential liability if the VA were to purchase health care services in the marketplace. Variation among hospitals on expenditures not clearly identified in the CDR was significant and raises questions about the effectiveness of capitated budget methodologies using either the CDR or the decision support system.

PMID: 12773830

19: Med Care. 2003 Jun;41(6 Suppl):II1.

The cost of VA care: lessons of the evaluating VA costs study. Preface.

Demakis JG.

PMID: 12773821

20: Med Care. 2003 Jun;41(6 Suppl):II2-10.

Estimating private sector values for VA health care: an overview.

Nugent G, Hendricks A.

OBJECTIVES: To provide an overview of methods used to establish what taxpayer costs would be if all Veterans Health Administration (VA) patient care were paid for by the federal government but provided in the private sector. METHODS: Study assumptions included (1) that there would be a hypothetical policy change to pay for VA care through a Medicare-based fee-for-service program, (2) that the VA coverage benefit would not change, (3) that practice styles would remain the same, and (4) that there would be no impact on market values. To achieve the objective, project

staff adapted Medicare payment schedules and guidelines, where available, with oversight of an advisory committee with VA and non-VA expertise in costs and data. For six sites, detailed payments were estimated using VA utilization databases and software and Medicare rate schedules available in the private sector. Overhead, interest on capital, and malpractice costs were added to VA-reported operating costs. Patient severity was examined, and patient-level costs were explored. FINDINGS: Detailed methods for pricing seven types of health services are presented. Three methods articles focus on process issues. DISCUSSION: Because VA care is not directly comparable with private sector health care as a result in part of differences in benefits covered and the scope of services provided, estimating costs for this care based on a private sector model requires careful consideration of market valuation approaches. The articles in this supplement describe the methods used to estimate market values for VA care so that other researchers can use them in future studies. PMID: 12773822

21: Med Care. 2003 Jun;41(6 Suppl):II11-22.

Methods for estimating private sector payments for VA acute inpatient stays.

Render ML, Roselle G, Franchi E, Nugent LB.

OBJECTIVES: To describe methods for estimating hypothetical private sector payments for Veterans Health Administration (VA) acute inpatient stays. METHODS: We assumed all VA hospitalizations would have occurred under a hypothetical VA system that paid private sector providers but had the current benefit package for VA patients. We compared aggregate budgets for VA inpatient care (less physician salaries) at six VA hospitals over federal fiscal year 1999 to aggregated hypothetical private sector payments developed using VA diagnosis-related groups matched to metropolitan-based average Medicare payments. Counts of care came from the VA's statistical analysis system (SAS) inpatient files. Inpatient stays with both medical or surgical and psychiatric or rehabilitation care were counted as two stays. An external auditor conducted three reviews of VA coding practices during the study year, and the appropriateness of admissions was examined using a commercial utilization review tool. RESULTS: For 30,518 inpatient discharges, hypothetical payments were \$188 million, compared with the VA budget of \$171 million. Fifteen of the 25 most frequent diagnosis-related groups in the VA were also in the top 25 for Medicare in 1998 and 1999. Audits established that the overall financial impact of VA coding problems was similar to that in the private sector. DISCUSSION: Differences in organization, practice, and incentives limit estimates of the financial impact of shifting VA acute inpatient care to the private sector. PMID: 12773823

22: Med Care. 2003 Jun;41(6 Suppl):II23-32.

Estimating private sector professional fees for VA providers.

Roselle G, Render ML, Nugent LB, Nugent GN.

OBJECTIVES: To describe new methods used to estimate inpatient and outpatient Medicare-based professional fees for Veterans Health Administration (VA) services. METHODS: National VA utilization files provided estimates of inpatient physician services, whereas local provider and utilization files gave counts of outpatient services by physicians, nurse practitioners, physician assistant, clinical psychologists, and clinical social workers. Services from ambulatory surgery, emergency room, and clinics (eg, dermatology and gastroenterology) were coded by study health information management staff (coders). VA-based billing information was edited against Medicare guidelines. Estimates for VA services without comparable Medicare fees were obtained from other commercial sources. RESULTS: Hypothetical professional fees for VA services were 17% more (\$109 million vs. \$93 million) than

the VA budget for physicians over 1 fiscal year at six sites. Total payments of nearly \$21 million were generated for VA inpatient care. In fiscal year 1999, there were 30,209 admissions (of which 4549 were psychiatric) to the study sites; 30,518 discharges; 229,783 inpatient days, including 27,235 in critical care units; and 38,348 surgical days of care. DISCUSSION: Differences between the VA and the private sector maybe overstated because VA salaries of nonphysicians were not included in the VA budgets. Conversely, the extent to which VA professional services were undercounted in VA information systems used in this study may understate the difference. Future research may consider additional data collection approaches or information systems enhancements to enumerate more accurately all provider services that are reimbursable in the private sector.
PMID: 12773824

23: Med Care. 2003 Jun;41(6 Suppl):II33-42.

Methods to determine private sector payment for VA outpatient services: institutional payments to providers.

OBJECTIVES: To describe methods used to estimate hospital institutional (facility) payments for providing Veterans Health Administration (VA) outpatient services. METHODS: A series of audits compared the accuracy of outpatient coding at six VA medical centers in federal fiscal year 1999 with private sector standards. Outpatient records were processed through industry standard software to determine validity and remove inappropriate services. Private sector payments were estimated by applying average payment data from Medicare cost reports and Medicare outpatient prospective payment schedules to counts of VA services. RESULTS: Coding audits found little difference in accuracy between VA and the community. Physician visits generated the most estimated payments and deviated most from Medicare payment experience. Radiology and laboratory services were the next highest expenditure categories for both the VA and Medicare. The proportion of radiology payments in VA data was notably lower and ambulatory surgery notably higher than Medicare's experience. Within major categories, the relative rankings of VA and Medicare services were consistent. DISCUSSION: Differences in payment criteria make exact cost comparisons of hospital-based and office-based settings difficult, particularly physician visits. Two VA clinical software applications, radiology and laboratory, provide information not readily convertible to a claims format; these applications need significant changes to be used for these purposes. They understate radiology services and overstate laboratory services compared with private sector standards. In addition, the laboratory application contains inappropriate or unspecified codes that cannot be accurately valued for many reasons.

PMID: 12773825

24: Med Care. 2003 Jun;41(6 Suppl):II43-51.

Estimating private sector payments for VA specialized inpatient care.

Hendricks A, Whitford J, Nugent LB.

OBJECTIVES: To describe methods for estimating what payments to private sector providers might be for specialized inpatient care in the absence of Veterans Health Administration (VA) facilities. METHODS: Psychiatric, rehabilitation, domiciliary, partial and day hospitalization, and psychiatric residential treatment programs at six study sites were audited for program content that would meet Medicare criteria for excluding providers from the prospective payment system. A 10% sample of patients in each program was also audited to see if they met VA program criteria. For programs similar to prospective payment system-exempt community-based providers, total days of care were valued at per diem rates calculated for those Medicare providers. RESULTS: Not all specialized programs at the study sites were

similar to private sector programs. Day hospitalization programs did not involve physicians, and inpatient psychiatric care was judged to be payable under acute diagnosis-related groups. Blind rehabilitation was different from any private sector program identified. For programs qualifying under Medicare exclusion rules, a majority of patients would meet criteria with minor changes in VA documentation. DISCUSSION: Researchers need to separate specialized inpatient care from acute services in estimating payments. This caution applies especially to rehabilitation, psychiatric, and long-term care, often provided to patients in VA acute bedsections. As with Medicare, benefits extend to higher costs of care not correlated with current measures of acuity or diagnoses. Medicare bases payments on the costs of the specialized providers of this care.
PMID: 12773826

25: Med Care. 2003 Jun;41(6 Suppl):II52-60.

What would VA nursing home care cost? Methods for estimating private sector payments.

Hendricks A, Whitford J, Nugent G.

OBJECTIVES: To describe the methods used to validate Veterans Health Administration (VA) nursing home acuity data and estimate hypothetical payments for nursing home patients in VA-based and community-based units. METHODS: For a sample of VA-based and community-based nursing home patients at six sites, auditors validated the resource utilization classifications from the most recent complete full or quarterly assessments. Scores were averaged to obtain an acuity index for each nursing home population. Per diem rates were calculated for a fully phased-in Medicare prospective payment system, a transitional prospective payment system for free-standing and hospital-based nursing homes, and average national Medicaid benefits based on VA patients in community nursing facilities. Days of care came from each site's end of year gains and losses financial statement. Nursing home estimates were calculated by multiplying together the number of days of care, the per diem, and the acuity index. RESULTS: The VA acuity information was valid. Generally, veterans' dependencies and depression were underscored (similar to the practice for non-VA patients). The cost of patients' nursing home care absent VA facilities would depend on the types of nursing homes in which they were placed. The most costly option (hospital-based facilities with cost exemptions) would cost 3.5 times the least costly. Only the Medicaid-only estimate was lower than actual VA expenditures. DISCUSSION: Future research on nursing homes must relate quality to the cost of care to help policy makers assess the value of different options for providing that care.

PMID: 12773827

26: Med Care. 2003 Jun;41(6 Suppl):II61-9.

Methods for estimating and comparing VA outpatient drug benefits with the private sector.

Render ML, Nowak J, Hammond EK, Roselle G.

OBJECTIVES: To estimate and compare Veterans Health Administration (VA) expenditures for outpatient pharmaceuticals for veterans at six VA facilities with hypothetical private sector costs. METHODS: Using the VA Pharmacy Benefits Management Strategic Health Care Group (PBM) database, we extracted data for all dispensed outpatient prescriptions from the six study sites over federal fiscal year 1999. After extensive data validation, we converted prescriptions to the same units and merged relevant VA pricing information by National Drug Code to Redbook listed average wholesale price and the Medicaid maximal allowable charge, where available. We added total VA drug expenditures to personnel cost from the pharmacy

portion of that medical center's cost distribution report. RESULTS: Hypothetical private sector payments were \$200.8 million compared with an aggregate VA budget of \$118.8 million. Using National Drug Code numbers, 97% of all items dispensed from the six facilities were matched to private sector price data. Nonmatched pharmaceuticals were largely generic over-the-counter pain relievers and commodities like alcohol swabs. The most commonly prescribed medications reflect the diseases and complaints of an older male population: pain, cardiovascular problems, diabetes, and depression or other psychiatric disorders. CONCLUSIONS: Use of the VA PBM database permits researchers to merge expenditure and prescription data to patient diagnoses and sentinel events. A critical element in its use is creating similar units among the systems. Such data sets permit a deeper view of the variability in drug expenditures, an important sector of health care whose inflation has been disproportionate to that of the economy and even health care. PMID: 12773828

27: Med Care. 2003 Jun;41(6 Suppl):II70-9.

Methods to estimate and compare VA expenditures for assistive devices to Medicare payments.

Render ML, Taylor P, Plunkett J, Nugent GN.

OBJECTIVE: To describe the methods used to estimate and compare Veterans Health Administration (VA) annual expenditures for assistive devices and their repair at six VA hospitals with payments for those same devices in the private sector. METHODS: Information about dispensed assistive devices and their costs was extracted from (1) the VA's National Prosthetic Patient Database, (2) each site's listing of the VA's Denver Distribution Center cost center in the Cost Distribution Jurisdictional Report, and (3) review of invoices for implanted prosthetics at each study site. We estimated private sector payments by applying Medicare geographically adjusted rates for purchases or rentals, where rates existed, or by inflating VA costs by 30%. RESULTS: The VA spent a total of \$30.6 million for prosthetics at the six sites in fiscal year 1999, of which \$14.2 million was for items captured in the National Prosthetic Patient Database, \$3.4 million for the Denver Distribution Center, and more than \$8.1 million for implants. Indirect VA costs were estimated at \$4.8 million. Hypothetical private sector payments were estimated at \$49.8 million. CONCLUSIONS: Unlike Medicare, VA both contracts to provide assistive devices (through a competitive bidding process) and dispenses devices it has purchased. This approach results in significantly lower expenditures, consistent with other reports. Generalizing these cost savings to other private or federal programs covering assistive devices requires further study.

PMID: 12773829

28: Med Care Res Rev. 2003 Jun;60(2):178-200.

Differential adoption of pharmacotherapy recommendations for type 2 diabetes by generalists and specialists.

Pugh MJ, Anderson J, Pogach LM, Berlowitz DR.

Newer, multimедication (novel) regimens provide better glycemic control for many type 2 diabetics when sulfonylurea monotherapy (traditional) becomes ineffective. Because better glycemic control is associated with decreased likelihood of complications and lower utilization and cost of care, the authors examined change in prescribing patterns for veterans with type 2 diabetes between FY 97 and 99. They classified medication regimens as traditional and novel based on the combination of diabetes medications patients received at the end of each year. Multivariate logistic regression analyses controlling for disease severity indicated that patients were more likely to receive novel regimens over time, but those seen only in primary care were

less likely to receive novel regimens than those previously seen by a specialist. Geographic differences and differences in how recommendations were implemented by generalists and specialists suggest that diffusion of innovations theory may help explain variations in practice and guide interventions designed to translate research into practice.

PMID: 12800683

29: Med Care Res Rev. 2003 Jun;60(2):158-77.

The association between three different measures of health status and satisfaction among patients with diabetes.

Kerr EA, Smith DM, Kaplan SH, Hayward RA.

Studies suggest that health status influences patient satisfaction, but little work has examined the influence of different measures of health status on satisfaction. The authors examined whether the association between health status and satisfaction varied for different measures of health status among 2000 diabetic patients receiving care across 25 Veterans Affairs facilities. Health status was measured using (1) the diabetes-related components of the Total Illness Burden Index (DM TIBI), a measure of diabetes severity and comorbidities; (2) the Short Form 36 (SF-36) Physical Function Index (PFI10); and (3) the SF-36 general health perceptions question (SF-1). Satisfaction was measured both by a 5-item scale on satisfaction with patient-provider communication and by a single item on overall diabetes care satisfaction. In adjusted models, worse health on all three health status measures correlated with lower satisfaction, but the DM TIBI explained more of the variation in satisfaction than either the PFI10 or SF-1. Moreover, when the DM TIBI was added to the model containing PFI10, PFI10 was no longer significantly associated with satisfaction. In this diabetes population, health status appears to have a substantial impact on patient satisfaction, and this effect is considerably greater for diabetes severity than for physical functioning.

PMID: 12800682

30: Med Care Res Rev. 2003 Jun;60(2):253-67.

VHA enrollees' health care coverage and use of care.

Shen Y, Hendricks A, Zhang S, Kazis LE.

The authors examined health care coverage for Veterans' Health Administration (VHA) enrollees and how their reliance on VHA care varies by coverage, using the largest and most detailed survey of veterans using VHA services ever conducted. The results showed that a majority of veterans who use VHA services have alternative health care coverage and that most of them use both VHA and non-VHA health care. The findings have important implications for quality of care and coordination of care.

PMID: 12800686

31: Mil Med. 2003 May;168(5):399-403.

Socioenvironmental context of sexual trauma and well-being of women veterans.

DeRoma VM, Root LP, Smith BS Jr.

The incidence of episodes of harassment and rape among military populations has only recently been examined. In the present study, a sample of 336 female veterans in a primary care setting was assessed. The incidences of lifetime sexual victimization, anxiety, depression, and impact of trauma for victims of specific trauma contexts are presented. Results of the study indicated that female veterans with a history of cumulative rape experiences and civilian rape experiences are more at risk for anxiety and depression than those with only a military experience of rape.

No significant differences were found for impact of event scores for different contexts of rape, however. Reporting of trauma was not associated with psychological well-being for women veterans. The results highlight the role of the socioenvironmental context of abuse as an important variable to examine, especially in military populations.

PMID: 12775177

32: Mod Healthc. 2003 May 19;33(20):48-50, 62.

An army of patients. The VA struggles with a growing population of veterans using its healthcare system as it works to boost quality and capacity.

Fong T.

PMID: 12800589

33: N Engl J Med. 2003 May 29;348(22):2209-17.

Comment in:

N Engl J Med. 2003 May 29;348(22):2251-2.

Regionalization and the underuse of angiography in the Veterans Affairs Health Care System as compared with a fee-for-service system.

Petersen LA, Normand SL, Leape LL, McNeil BJ.

BACKGROUND: Policies to concentrate or regionalize invasive procedures at high-volume medical centers are under active consideration. Such policies could improve outcomes among those who undergo procedures while increasing their underuse among those who never reach such centers. We compared the underuse of needed angiography after acute myocardial infarction in a traditional Medicare fee-for-service system with underuse in the regionalized Department of Veterans Affairs (VA) health care system. **METHODS:** We studied 1665 veterans from 81 VA hospitals and 19,305 Medicare patients from 1530 non-VA hospitals, all of whom were elderly men. We compared adjusted angiography use and one-year mortality among patients for whom angiography was rated as clinically needed. We compared underuse in models before and after controlling for the on-site availability of cardiac procedures.

RESULTS: After adjustment for the need for angiography, underuse was present in both groups, but VA patients remained significantly less likely than Medicare patients to undergo angiography (43.9 percent vs. 51.0 percent; odds ratio, 0.75; 95 percent confidence interval, 0.57 to 0.96). After also controlling for on-site availability of cardiac procedures at the admitting hospital, we found no significant difference in the underuse of angiography among VA patients as compared with Medicare patients (odds ratio, 1.02; 95 percent confidence interval, 0.82 to 1.26) or in one-year mortality (odds ratio, 1.08; 95 percent confidence interval, 0.89 to 1.28).

CONCLUSIONS: There is underuse of needed angiography after acute myocardial infarction in both the VA and Medicare systems, but the rate of underuse is significantly higher in the VA. These differences appear to be associated with limited on-site availability of cardiac procedures in the regionalized VA health care system. Further work should focus on how regionalization policies could be improved with effective referral and triage processes.

PMID: 12773649

34: N Engl J Med. 2003 May 29;348(22):2218-27.

Comment in:

N Engl J Med. 2003 May 29;348(22):2251-2.

Effect of the transformation of the Veterans Affairs Health Care System on the quality of care.

Jha AK, Perlin JB, Kizer KW, Dudley RA.

BACKGROUND: In the mid-1990s, the Department of Veterans Affairs (VA) health care system initiated a systemwide reengineering to, among other things, improve its quality of care. We sought to determine the subsequent change in the quality of health care and to compare the quality with that of the Medicare fee-for-service program. **METHODS:** Using data from an ongoing performance-evaluation program in the VA, we evaluated the quality of preventive, acute, and chronic care. We assessed the change in quality-of-care indicators from 1994 (before reengineering) through 2000 and compared the quality of care with that afforded by the Medicare fee-for-service system, using the same indicators of quality. **RESULTS:** In fiscal year 2000, throughout the VA system, the percentage of patients receiving appropriate care was 90 percent or greater for 9 of 17 quality-of-care indicators and exceeded 70 percent for 13 of 17 indicators. There were statistically significant improvements in quality from 1994-1995 through 2000 for all nine indicators that were collected in all years. As compared with the Medicare fee-for-service program, the VA performed significantly better on all 11 similar quality indicators for the period from 1997 through 1999. In 2000, the VA outperformed Medicare on 12 of 13 indicators. **CONCLUSIONS:** The quality of care in the VA health care system substantially improved after the implementation of a systemwide reengineering and, during the period from 1997 through 2000, was significantly better than that in the Medicare fee-for-service program. These data suggest that the quality-improvement initiatives adopted by the VA in the mid-1990s were effective.
PMID: 12773650

35: N Engl J Med. 2003 May 29;348(22):2251-2.

Comment on:

N Engl J Med. 2003 May 29;348(22):2209-17.

N Engl J Med. 2003 May 29;348(22):2218-27.

The right care.

Jencks S.

PMID: 12773654

36: Science. 2003 Jul 4;301(5629):24-5.

Biomedical research. VA shaken by plan to cut grants, cultivate the 'stars'.

Couzin J.

PMID: 12843360