Title

The quality of diabetes care for vulnerable patients with impaired physical functioning: The TRIAD study

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RESULTS: 500 randomly chosen charts were reviewed. 119 patients (111 female, 8 male) fulfilled the inclusion criteria and presented with complaint of pain on at least one office visit during that year. 381 charts were excluded. The 119 patients generated 312 visits. Of those, 193 visits were for pain. Nursing staff logged the pain score 93% (110) of the time, 2% incorrectly. A pain form was filed 63% (75) of the time. Physician documentation of the pain scale occurred only 60% (71) of the time, but pain was addressed and treated in 92% (110) of the visits. Pain was the chief complaint for 99% (191) of the visits.
CONCLUSIONS: We found that although pain was frequently identified in the outpatient setting, it was usually the principal complaint and was well documented by the nursing staff and well addressed by the physician. We could not demonstrate that the use of the pain scale conferred any benefit for the patient. These findings differ from previous studies conducted on inpatients, in which physicians performed poorly in both addressing and treating pain. We speculate that in the inpatient arena, physicians focus on the underlying disease process, while in the outpatient setting, the patient complaint is central to guiding the physician assessment. While we appreciate that the pain scale has been proven useful for inpatients, we would recommend that further studies be done to document the validity and value in the outpatient setting in order to justify the time and effort needed to satisfy this JCAHO mandate.

THE QUALITY OF DIABETES CARE FOR VULNERABLE PATIENTS WITH IMPAIRED PHYSICAL FUNCTIONING: THE TRIAD STUDY. O.K. Duru[1]; W.N. Steers[1]; A.F. Brown[1]; C.M. Mangione[1]. [1]University of California, Los Angeles, Los Angeles, CA. *(Tracking ID # 153458)*

BACKGROUND: Diabetes increases the probabilities of both developing physical impairment and progressing to disability. Aggressive treatment of intermediate outcomes such as hemoglobin A1c (hereafter, A1c) and systolic blood pressure (hereafter, SBP), in persons with both diabetes and impaired physical functioning, may play a role in slowing this progression. However, few studies to date have examined the quality of intermediate outcome treatment in a physically impaired population with diabetes, or how quality of care for this group differs by income, living situation, or likelihood of major depression.
METHODS: Data were collected from 2,792 patients during 2001and 2002 from 10 managed care plans and 68 provider groups included in the Translating Research into Action for Diabetes (TRIAD) study, a multicenter longitudinal cohort study of diabetes care in managed care. Using items drawn from the SF-12 health survey, we defined impaired physical functioning as 1 standard deviation below the age-normed population mean for the Physical Component Score (PCS-12). We examined multiple dependent variables, including: 1) continuous values of intermediate outcomes (A1c and SBP), and 2) a dichotomous measure of intensity of clinical management for these two outcomes. Specifically, we examined whether patients were either in good control (A1c $<8\%$ or SBP <140 mmHg), or if not, then receiving either insulin or at least 2 classes of hypoglycemic medications in the setting of elevated A1c values, or receiving at least 2 classes of antihypertensive medications in the setting of elevated SBP. Using adjusted multivariate models, we generated predicted probabilities for each of these outcomes for patients with impaired physical functioning ($n=890$) and those with normal physical functioning ($n=1902$, defined as PCS-12 score at or above the age-normed population mean). Among patients with impaired functioning, we then examined these outcomes among patients with low vs. high income, living alone vs. living with others, and PHQ-8 scores of 1–9 (low risk of major depression) vs. 10–27 (moderate to severe risk of major depression).
RESULTS: After adjustment, patients with impaired physical functioning were more likely than those with normal physical functioning to receive intense clinical management of SBP (86% vs. 79%, $p<0.001$). No differences in continuous intermediate outcome values or in A1c management were seen between these two groups. Within the group with impaired physical functioning, patients with annual incomes $<\$15{,}000$ had lower A1c values than those with annual incomes $>\$15{,}000$ (8.0 vs. 8.3, $p=.04$). However, higher-income patients were more likely to receive intense clinical management of A1c, compared to lower-income patients (92% vs. 85%, $p=0.02$). No other significant differences were seen by income, living situation, or PHQ-8 score.
CONCLUSIONS: Among this insured managed care cohort, quality of diabetes care for intermediate outcomes is similar regardless of physical functioning. Among the group with impaired physical functioning, few differences in quality are observed even among potentially vulnerable patients who are either low-income, living alone, or screening positive for a moderate to severe risk of major depression.

THE QUALITY OF PRIMARY CARE DELIVERED BY PHYSICIAN GROUPS: DOES AFFILIATION OF PHYSICIAN GROUPS WITH ONE ANOTHER PRODUCE HIGHER QUALITY CARE?. M.W. Friedberg[1]; K. Coltin[2]; S. Pearson[3]; K.P. Kleinman[3]; J. Zheng[4]; J. Singer[2]; E.C. Schneider[1]. [1]Brigham and Women's Hospital Division of General Internal Medicine, Boston, MA; [2]Massachusetts Health Quality Partners, Watertown, MA; [3]Department of Ambulatory Care and Prevention, Harvard Medical School, Boston, MA; [4]Department of Health Policy and Management, Harvard School of Public Health, Boston, MA. *(Tracking ID # 152860)*

BACKGROUND: Recent reports from the Institute of Medicine calling for improvement in the quality of health care in the United States have suggested that health care delivery systems, rather than individual physicians, should be the focus of quality improvement efforts. The current organization of primary care delivery systems varies widely, both in the size of physician groups and in the degree to which groups affiliate with each other in networks. Larger physician groups or networks of affiliated physician groups, rather than small independent physician practices, may be best situated to employ the systems approach envisioned by the IOM, but few prior studies have assessed differences in the quality of primary care delivered by physician groups that differ in size and organizational configuration. Our objective was to determine whether the quality of primary care delivered by physician groups is higher for larger groups compared to smaller groups and whether it is higher for groups that affiliate with networks of physician groups.
METHODS: We performed a cross-sectional analysis of the quality of adult primary care delivered by 132 physician groups (including 4,358 physicians) in Massachusetts during 2002. To do this, we analyzed data on 12 Health Plan Employer Data and Information Set (HEDIS) measures that were provided by the 5 largest commercial health plans operating in Massachusetts. The relationships between group size, network affiliation, and HEDIS performance scores were assessed in bivariate analysis and in multivariable models for each measure that included receipt of the HEDIS measured service as the dependent variable and group size, network affiliation status, and the health plan associated with each observation as the independent variables.
RESULTS: Average performance scores across the 12 measures ranged from 31% (antidepressant medication management: optimal practitioner contacts during acute phase) to 87% (comprehensive diabetes care: HbA1c testing). In unadjusted bivariate analysis, network-affiliated physician groups had higher performance scores than non-network-affiliated groups for 9 of the 12 HEDIS measures ($p<0.0005$). After statistical adjustment, there was no consistent relationship between group size and clinical performance, but network-affiliated groups had higher performance scores than non-network-affiliated groups on 8 of the 12 HEDIS measures ($p<0.05$). Adjusted differences in the performance scores of network-affiliated and non-network-affiliated groups on these measures ranged from 2% to 15% (with statistically significant odds ratios of 1.10 to 1.97). For 4 HEDIS measures related to diabetes care, the performance score difference between network-affiliated and non-network-affiliated groups was greatest when groups were small and diminished when groups were medium or large in size. There were no statistically significant interactions between group size and network affiliation for the remaining HEDIS measures.
CONCLUSIONS: Compared to smaller physician group size, larger group size was not consistently associated with higher quality primary care. Affiliation of physician groups with networks of multiple groups was associated with higher quality, and this association seemed to be especially important for smaller physician groups. Future studies should explore the features of network affiliation that contribute to the higher quality of primary care we observed.

THE RELATIONSHIP BETWEEN GUIDELINE ADHERENT ANTIDEPRESSANT TREATMENT WITH GLYCEMIC CONTROL AMONG VETERANS WITH DIABETES MELLITUS. L.E. Jones[1]; C.C. Doebbeling[2]. [1]Richard L. Roudebush VA Medical Center Health Services Research Center for Excellence, Indianapolis, IN; [2]Indiana University School of Medicine, Indianapolis, IN. *(Tracking ID # 154321)*

BACKGROUND: Almost 50% of subjects with major depression have poor glycemic control. Little is known on how the quality of antidepressant therapy influences glycemic control. Results from one study conducted to date in a HMO population report that the quality of antidepressant therapy is not associated with glycemic control, although methodologic problems limit the inferences that can be made. The objective of this study was to determine whether receipt of a minimum therapeutic antidepressant dosage and an adequate duration of antidepressant therapy result in improved glycemic control among veterans with diabetes mellitus (DM) in the Veterans Health Administration (VHA).
METHODS: A 100% sample of clinical data (1997–2005) from the Roudebush VAMC in Indianapolis was analyzed. Subjects with DM were included if they had a new-onset depression, had neither schizophrenia nor bipolar disorder, had a baseline and follow-up HbA1c test, and received antidepressants within the first 84-days (acute phase) of the depression diagnosis. The baseline HbA1c test reflects glycemia in the 180-day period prior to the depression diagnosis when antidepressants were not used and depression symptoms were minimized or non-existent. The follow-up HbA1c test was the first HbA1c test occurring 60-days following initiation of antidepressant therapy to the end of the 264-day depression treatment period. The quality of antidepressant dose and duration was assessed in the 60-day period prior to follow-up HbA1c testing. Adequate treatment was received if both a minimum therapeutic antidepressant dosage and at least 48-days (medication possession ratio of 80%) of antidepressant medication were received. Otherwise, the quality of therapy was inadequate. Analysis of covariance was used to determine if the mean glycemic control at follow-up was associated with the quality of antidepressant therapy after adjusting for demographic, clinical, and healthcare utilization factors.
RESULTS: 773 subjects had DM, a new-onset depression and received antidepressant therapy. 323 (42%) received both a baseline and follow-up HbA1c test at the specified time periods. 20 (6%) subjects received both an adequate antidepressant dosage and duration in the 60-day period prior to follow-up HbA1c testing. Subjects in the two groups were similar with respect to demographic, clinical and healthcare utilization factors. A non-significant reduction in HbA1c level was noted ($p>0.05$). Subjects who received adequate treatment experienced a 0.5% decline in HbA1c level (from 7.9% to 7.4%) and subjects who received inadequate treatment experienced a 0.2% reduction (from 7.7% to 7.5%). Follow-up HbA1c testing was measured, on average, 149-days following the depression diagnosis. Multivariate analysis did not show a significant association between quality of antidepressant therapy and glycemic control ($\beta_{inadequate}=0.38$; CI_{95}: -0.56, 1.32).
CONCLUSIONS: The quality of antidepressant therapy was not related to glycemic control in this VHA population. Results show that adequate pharmacotherapy of depression result in a clinically, albeit not statistically, meaningful decline in HbA1c level. Insufficient statistical power due to small sample size