RACE AND HOSPITAL DISCHARGE AGAINST MEDICAL ADVICE

Ernest Moy, MD, MPH, and Barbara A. Bartman, MD, MPH
Baltimore, Maryland

This study examines the relationship between race and discharge against medical advice from hospitals. Data were taken from the 1990 National Hospital Discharge Survey, which provides national estimates of hospitalizations in short-stay hospitals. Discharges against medical advice by white, African-American, and other race patients were examined. In 1990, there were an estimated 241,911 discharges against medical advice, accounting for 0.92% of all live discharges. In bivariable analyses, African-American patients were 1.78 times more likely then white patients to be discharged against medical advice. This may reflect greater dissatisfaction with inpatient care by African-American patients and may expose them to additional risk for adverse medical outcomes. Optimization of the delivery of inpatient services to patients of all races requires addressing this inequity. (*J Natl Med Assoc.* 1996;88:658-660.)

Key words • hospital discharge • African Americans

Racial minorities are less satisfied with the medical care they receive. Among Medicare beneficiaries, African-American and Hispanic patients report less satisfaction with care than white patients, and African-American patients report less confidence in their physicians.[1] Among Medicaid beneficiaries, nonwhite patients report less satisfaction with several dimensions of primary care.[2] In North Carolina, African-American patients with hypertension report not being treated as well by their sources of ambulatory care.[3] Racial differences in dissatisfaction with care are even larger in the inpatient setting than in the outpatient setting.[4]

From the Division of General Internal Medicine, University of Maryland School of Medicine and the Baltimore VAMC, Baltimore, Maryland. Requests for reprints should be addressed to Dr Ernest Moy, Dept of Medicine, 419 W Redwood St, Ste 470A, Baltimore, MD 21201.

Dissatisfaction with inpatient care may lead a patient to leave a hospital against medical advice. Such discharges place the patients at risk for adverse medical outcomes, disrupt the therapeutic relationship, demoralize staff, waste medical resources, and expose the hospital to liability.[5,6] Overall, about 1% of patients discharged from hospitals leave against medical advice, although some institutions report higher rates.[7] Adult patients who leave against medical advice tend to be younger, male, uninsured or covered by Medicaid, lacking a primary care physician, and initially admitted for substance abuse or mental disorders.[8-14]

Little is known about the relationship between race and hospital discharge against medical advice. One study suggested African-American patients are more likely to leave against medical advice but was too small to perform significance testing.[10] This article describes a study that examines discharges against medical advice by racial minorities using the 1990 National Hospital Discharge Survey. It provides national estimates of the magnitude of this problem and tests the hypothesis that minorities are more likely than whites to leave hospitals against medical advice.

METHODS

This study is a secondary data analysis of the 1990 National Hospital Discharge Survey. This survey is conducted annually by the National Center for Health Statistics and is designed to provide national estimates of hospitalizations in nonfederal short-stay hospitals. In 1990, the National Hospital Discharge Survey collected data on approximately 266,000 discharges from 474 hospitals.[15]

This study was limited to adults who were discharged from the hospital alive. In total, the 1990 National Hospital Discharge Survey contains 207,531 discharges by patients aged ≥18 years. Discharges that resulted in patient death (6614) or that did not include a discharge disposition (2761) were excluded. This yielded 198,156 live hospital discharges, correspond-

TABLE 1. DISCHARGES AGAINST MEDICAL ADVICE BY PATIENT RACE

Race	No. AMA Discharges (95% CI)	AMA Discharges as % of All Live Discharges	Odds Ratio
All races	241,911 (215,614 to 268,208)	0.92	—
White	158,503 (138,846 to 178,160)	0.85	Ref
African American	44,171 (34,940 to 53,402)	1.50	1.78
Other	8382 (4,965 to 11,799)	1.05	1.24
Not stated	30,855 (20,406 to 41,304)	0.76	0.89

Abbreviations: AMA=against medical advice and CI=confidence interval.

ing to a national estimate of 26.4 million discharges.

Among patients discharged alive, hospitals reported discharge disposition as routine discharge/discharged home, left against medical advice, transferred to another hospital, transferred to a long-term care institution, or other disposition. This study compares discharges with a disposition of left against medical advice with all other live discharges.

Hospitals reported patient race as white, black, American Indian/Eskimo Aleut, Asian/Pacific Islander, other, or not stated. In this study, American Indian/Eskimo Aleut, Asian/Pacific Islander, and other patients were combined as "other race."

National estimates of discharges against medical advice were calculated using weights that account for survey sampling and nonresponse. Confidence intervals of national estimates were calculated using formulas provided by the National Center for Health Statistics.[15] The percent of live discharges that were against medical advice by patient race and the odds of discharge against medical advice by nonwhite patients relative to white patients also were calculated.

Because other patient and hospital characteristics have been associated with discharges against medical advice, multivariable analyses were performed. The logistic regression model controlled for patient age, gender, insurance or other expected source of payment, region of the country, hospital type, and the presence of various diagnoses previously shown to be associated with discharge against medical advice. These diagnoses are alcohol-related disorders, drug-related disorders, poisoning, schizophrenia, depression, and other mental disorders as defined by a classification system developed by the Agency for Health Care Policy and Research.[16] Multivariable results are presented as adjusted odds ratios.

RESULTS

Overall, there were 241,911 discharges against medical advice from nonfederal short-stay hospitals in 1990 (Table 1). Whites accounted for 158,503 of these discharges, and African Americans accounted for 44,171 of these discharges. Discharges against medical advice were relatively rare, accounting for only 0.92% of all live discharges. However, African-American patients were 1.78 times more likely then white patients to be discharged against medical advice.

In multivariable analyses, controlling for other patient and hospital characteristics attenuated the relationship between patient race and discharge against medical advice (Table 2). Nevertheless, after adjustment, African Americans remained more likely to be discharged against medical advice.

CONCLUSIONS

These results indicate that African-American patients are more likely than white patients to be discharged against medical advice. This is the first demonstration of this relationship among general hospitals. It is consistent with work showing that racial minorities are less satisfied with the medical care they receive.

In addition, these findings confirm previous findings about discharges against medical advice. The overall rate of discharge against medical advice in this study is consistent with previously reported rates. Despite this low overall rate, we estimate that almost a quarter of a million patients leave the hospital annually against medical advice. We also confirm that men, individuals with public insurance or no insurance, and individuals with substance abuse or mental disorders are more likely to be discharged against medical advice and that older individuals are less likely to be discharged against medical advice.

Limitations of this study should be noted. Race is difficult to measure.[17] Perhaps reflecting this difficulty, 19% of adult discharges in this survey did not state the patient's race. To address this problem, we included the "race not stated" population in our analyses. In both bivariable and multivariable analyses, this population was not significantly different from the total adult population in discharges against medical advice.

TABLE 2. DISCHARGES AGAINST MEDICAL ADVICE ADJUSTING FOR PATIENT AND HOSPITAL CHARACTERISTICS

Characteristic	Adjusted Odds Ratio (95% CI)
Race	
White	Reference
African American	1.18 (1.04 to 1.35)
Other	0.82 (0.64 to 1.05)
Not stated	0.93 (0.81 to 1.06)
Age*	0.82 (0.79 to 0.84)
Gender	
Female	Reference
Male	2.18 (1.98 to 2.40)
Insurance	
Private	Reference
Medicare	1.49 (1.27 to 1.75)
Medicaid	2.71 (2.36 to 3.11)
Other	1.54 (1.28 to 1.85)
Self-pay/no charge	3.46 (3.00 to 4.00)
Region	
Northeast	Reference
South	0.76 (0.68 to 0.86)
Midwest	0.54 (0.47 to 0.62)
West	0.76 (0.65 to 0.89)
Hospital type	
Nonprofit	Reference
Proprietary	1.25 (1.04 to 1.50)
Government	1.16 (1.00 to 1.35)
Diagnoses	
Alcohol-related	2.20 (1.99 to 2.44)
Drug-related	3.68 (3.21 to 4.21)
Poisoning	1.93 (1.49 to 2.51)
Schizophrenia	1.62 (1.30 to 2.01)
Depression	2.30 (1.99 to 2.67)
Other mental disorders	1.19 (1.08 to 1.31)

Abbreviations: CI=confidence interval.
*Odds ratio represents decrease in odds of discharge against medical advice for each 10-year increase in age.

More importantly, this study could not address the reasons African Americans are more likely to be discharged against medical advice. Do African-American patients have greater fear of recommended therapies, less confidence in their health-care providers, unrealistic expectations of inpatient care, or competing responsibilities that lead to greater discharges against medical advice? Are African-American patients less able to weather the financial drain of illness and hospitalization? Are physicians less able or willing to communicate their recommendations to African-American patients, to appreciate concerns expressed by African-American patients, or to negotiate treatment alternatives with African-American patients? Do hospitals value the confidence and satisfaction of African-American patients less? To optimize the delivery of inpatient services to patients of all races, these questions need to be answered and any inequities resolved.

Acknowledgments

The authors thank Llewellyn Cornelius, PhD, and Claudia Baquet, MD, MPH, for their comments on the manuscript.

Literature Cited

1. Physician Payment Review Commission. *Annual Report to Congress 1994.* Washington, DC: Physician Payment Review Commission; 1994.

2. Temkin-Greener H, Winchell M. Medicaid beneficiaries under managed care: provider choice and satisfaction. *Health Serv Res.* 1991;26:509-529.

3. James SA, Wagner EH, Strogatz DA, Beresford SA, Kleinbaum DG, Williams CA, et al. The Edgecombe County (NC) high blood pressure control program, II: barriers to the use of medical care among hypertensives. *Am J Public Health.* 1984;74:468-472.

4. Blendon RJ, Aiken LH, Freeman HE, Corey CR. Access to medical care for black and white Americans. *JAMA.* 1989;261:278-281.

5. Corley MC, Link K. Men patients who leave a general hospital against medical advice: mortality rate within 6 months. *J Stud Alcohol.* 1981;42:1058-1061.

6. Endicott P, Watson B. Interventions to improve the AMA-discharge rate for opiate-addicted patients. *Journal of Psychosocial Nurs.* 1994;32:36-40.

7. Jones AA, Himmelstein DU. Leaving a county hospital against medical advice. *JAMA.* 1979;242:2758.

8. Jeremiah J, O'Sullivan P, Stein MD. Who leaves against medical advice. *J Gen Intern Med.* 1995;10:403-405.

9. Jankowski CB, Drum DE. Diagnostic correlates of discharges against medical advice. *Arch Gen Psychiatry.* 1977;34:153-155.

10. Schlauch RW, Reich P, Kelly MJ. Leaving the hospital against medical advice. *N Engl J Med.* 1979;300:22-24.

11. Wylie CM, Michelson RB. Age contrasts in self-discharge from general hospitals. *Hosp Formulary.* 1980;15:273-277.

12. Long JP, Marin A. Profile of patients signing against medical advice. *J Fam Pract.* 1982;15:551-556.

13. Smith DB, Telles JL. Discharges against medical advice at regional acute care hospitals. *Am J Public Health.* 1991;81:210-213.

14. Jeffer EK. Against medical advice, I: a review of the literature. *Mil Med.* 1993;158:69-73.

15. Graves EJ. National hospital discharge survey: annual summary, 1990. *Vital Health Stat 13.* 1992;112.

16. Elixhauser A, Andrews RM, Fox S. *Clinical Classifications for Health Policy Research: Discharge Statistics by Principal Diagnosis and Procedure.* Rockville, Md: Public Health Service; 1993. AHCPR publication 9300043.

17. LaVeist TA. Beyond dummy variables and sample selection: what health services researchers ought to know about race as a variable. *Health Serv Res.* 1994;29:1-16.