

## Race Disparities in Psychiatric Rates in Emergency Departments

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Psychiatric diagnoses based on the International Classification of Diseases—Ninth Revision were examined in the medical discharge records of 33,000 emergency department (ED) patients to determine if (a) psychiatric disorders were underdiagnosed, (b) there were race and gender disparities in psychiatric rates, and (c) psychiatric rates varied as a function of type of injury (e.g., self vs. other-inflicted injuries) and medical diagnosis. The observed psychiatric rate of 5.27% was far below the national prevalence rate of 20%–28%. Both race groups were underdiagnosed, but the underdiagnosis was larger for African Americans. Younger patients had fewer psychiatric diagnoses than older patients. Men had more psychiatric diagnoses overall, whereas women had more mood and anxiety diagnoses. Self-injury patients had much higher psychiatric rates than the other injury groups. This psychiatric underdiagnosis contributes to needless emotional suffering, especially for minorities and the poor who rely on EDs for most of their health care.

The Centers for Disease Control and Prevention (CDC) reported that the psychiatric rate in U.S. emergency departments (EDs) is approximately 3% (range = 2.7%–3.1%; cf. McCaig & Ly, 2002). This rate is far below the national psychiatric rate of 20%–28% (U.S. Department of Health and Human Services [USDHHS], 1999), suggesting that a significant psychiatric underdiagnosis is occurring in EDs. However, the full extent of this psychiatric underdiagnosis is unknown because only the rates of psychiatric diagnoses coded as the primary diagnosis were counted in McCaig and Ly's (2002) study. McCaig and Ly also did not examine rates of individual psychiatric disorders or whether psychiatric disorders varied as a function of gender, race, or age.

Two other studies also have documented very low psychiatric rates in EDs, but methodological limitations in these studies make it difficult to assess fully the extent of this underdiagnosis. In a study of more than 100,000 ED visits over 1 year in a large private

teaching hospital, a psychiatric rate of 2.60% was reported (Bowles, 1995). However, it is not clear whether substance use disorders (SUDS) were included or whether all psychiatric diagnoses (not just primary diagnoses) were counted. Bowles (1995) did not report rates of individual psychiatric disorders or whether psychiatric disorders varied as a function of gender, race, or age.

Mandelberg, Kuhn, and Kohn (2000) surveyed more than 300,000 visits to a single ED over a 5-year period and found a 1.41% psychiatric rate, although this rate undoubtedly underestimates the true rate because the study did not include data from the hospital's separate psychiatric ED. Mandelberg et al. also did not analyze the rates of individual psychiatric disorders or whether psychiatric disorders varied as a function of gender, race, or age.

ED visits have increased substantially from 89 million patient visits in 1992 to over 108 million visits in 2000 (McCaig & Ly, 2002). By the 1980s, EDs had become synonymous with 24-hr urgent health care, and in 1985 the Consolidated Omnibus Budget Reconciliation Act was passed, guaranteeing all patients access to health care in the ED. The section of the Consolidated Omnibus Budget Reconciliation Act specifically dealing with antidumping prohibitions is more commonly known as the Emergency Medical Treatment and Active Labor Act (EMTALA, 1985; amendments April 2000). EMTALA (1985) addresses the legal requirement to screen for psychiatric emergencies:

In the case of a hospital that has an emergency department, if any individual (whether or not eligible for Medicare benefits and regardless of ability to pay) comes by him or herself or with another person to the emergency department and a request is made on the individual's behalf for examination or treatment of a medical condition by qualified medical personnel (as determined by the hospital in its rules and regulations), the hospital must provide for an appropriate medical

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screening examination within the capability of the hospital's emergency department, including ancillary services routinely available to the emergency department, to determine whether or not an emergency medical condition exists. The examinations must be conducted by individuals determined qualified by hospital bylaws or rules and regulations and who meet the requirements of 482.55 concerning emergency services personnel and direction.

EMTALA defines an emergency medical condition as follows:

A medical condition manifesting itself by acute symptoms of sufficient severity (including severe pain, psychiatric disturbances and/or symptoms of substance abuse) such that the absence of immediate medical attention could reasonably be expected to result in placing the health of the individual (or, with respect to a pregnant woman, the health of the woman or her unborn child) in serious jeopardy.

According to the Surgeon General's Mental Health Report (USDHHS, 1999), the mental disorder prevalence rates for children and adults are approximately 20%.<sup>1</sup> If dual diagnoses and SUDS are included, then the national mental disorder prevalence rate is 20%–28%. In studies that have examined the rates of specific mental disorders among ED patients, the psychiatric rates often have been much higher than the national prevalence rates. For example, Schriger, Gibbons, Langone, Lee, and Altschuler (2001) reported the mood disorder prevalence rate among ED patients to be 40%. If ED physicians were conducting adequate psychiatric screens as mandated by EMTALA, then we would expect a substantial portion of ED patients to be diagnosed with a mental disorder.

We designed the present study to provide more accurate data on the extent to which ED physicians are diagnosing psychiatric disorders. We examined the frequency of all International Classification of Diseases—Ninth Revision (ICD-9) psychiatric discharge diagnoses given to more than 33,000 patients age 15 years and older in three EDs as a function of gender, race, age, injury status, and medical diagnosis. We also analyzed several psychiatric categories to determine whether the expected underdiagnosis was consistent across disorders. The psychiatric disorders surveyed by the Environmental Catchment Area (ECA) study (Robins & Regier, 1991) and the National Comorbidity Study (Kessler et al., 1994) guided our choice of disorders. The disorders we selected were mood disorders (e.g., depression), anxiety disorders (e.g., panic disorder, generalized anxiety disorder), SUDS, and psychotic disorders (e.g., organic psychoses, schizophrenia). We included tobacco use disorder<sup>2</sup> because tobacco use is the leading preventable cause of death in the United States, and it is responsible for more than 400,000 deaths annually (CDC, 1999).

The Surgeon General's supplement on mental health and race (USDHHS, 2001) indicates that African Americans and Caucasians have similar psychiatric rates (about 20%). However, we predicted that the psychiatric rates of African Americans in EDs would be significantly lower than the psychiatric rates of Caucasians, because African Americans are diagnosed with psychiatric disorders less often than Caucasians in primary care settings (Borowsky et al., 2000). Such a mental health disparity would have a greater negative impact on African Americans, because African Americans disproportionately rely on EDs as a source of care for all their health needs (Jacobs, Gavett, & Wersinger, 1991).

Few researchers have examined gender differences in psychiatric rates in EDs. The available data from community and primary

care studies indicate that women experience significantly more psychiatric disorders than men in general and more mood and anxiety disorders than men in particular (Kessler et al., 1994; Linzer et al., 1996; Robins & Regier, 1991). For example, Linzer et al. (1996) studied psychiatric disorders in four primary care clinics using the PRIME-MD inventory and found that women were more likely to have at least one mental disorder, more psychiatric comorbidities, and higher rates of mood, anxiety, somatoform, and eating disorders than men, whereas men were more likely to have alcohol use disorders. On the basis of these community and primary care center studies, we expected women to have higher psychiatric rates than men.

We also explored how psychiatric rates varied as a function of injury status. Accidental and intentional trauma are the leading causes of death among individuals age 1–44 years (Anderson, 2002). In 2000, there were more than 40 million ED visits due to injuries (McCaig & Ly, 2002). Of these 40 million, 3 million resulted from intentional injuries, and of these 3 million, approximately 28% (or 864,000) were self-inflicted. Intentional injury, particularly among men and minority youth, is a major, preventable, and often recurring U.S. public health problem (Reiner, Pastena, Swan, Lindenthal, & Tischler, 1990; Sims et al., 1989). The high rate of recurrent intentional injuries (Goins, Thompson, & Simpkins, 1992; Roodman & Clum, 2001) indicates that such injuries are not random events but are related to specific risk factors (K. A. Brown, Brown, Kennedy, & Fleming, 1998). The risk factors associated with self-inflicted injuries appear to differ in important ways from other-inflicted and unintentional injuries. Important risk factors for self-inflicted injuries include depression (which is believed to be involved in at least two thirds of all suicides), alcohol abuse, psychotic disorders, anxiety, a history of child abuse, and severe health problems, particularly among the elderly (Blumenthal, 1988; Heila et al., 1997; Whetsell, Patterson, Young, & Schiller, 1989).

In contrast, the risk factors associated with being a victim of other-inflicted injuries tend to be sociodemographic factors such as unemployment, low educational attainment, a history of exposure to violence, and being a young man from a minority group (K. A. Brown et al., 1998; Ponzer, Bergman, & Brismar, 1995). On the basis of our literature review, we predicted that patients with self-injuries would have higher rates of psychiatric disorders such as SUDS, mood disorders, anxiety disorders, and psychosis than patients who presented with other-inflicted injuries or with accidental injuries.

Because several studies have indicated that there may be an association between specific psychiatric diagnoses and medical conditions, we examined whether psychiatric diagnoses were equally distributed across medical diagnostic categories. For example, endocrine disorders may be associated with an increased risk of mood and anxiety disorders and psychosis (Joffe, Brasch, & MacQueen, 2003), whereas depression may be an independent risk factor for, as well as a consequence of, cardiovascular disease

<sup>1</sup> The Surgeon General's Mental Health Report of psychiatric disorders does not include tobacco use disorders.

<sup>2</sup> Tobacco use disorder is classified in the ICD-9 (Code 305.1) as a mental disorder.

Table 1  
*Demographic Characteristics by Age, Gender, Race, and ED*

Age	Gender	Race	Variable	ED			Total
				Rural	University	Private	
15–24	Men	Caucasian	<i>n</i>	402	429	264	1,095
			row %	36.71	39.18	24.11	100.00
		African American	<i>n</i>	6	1,998	612	2,616
	Women	Caucasian	row %	0.23	76.38	23.39	100.00
			<i>n</i>	477	517	333	1,327
		African American	row %	35.95	38.96	25.09	100.00
25–104	Men	Caucasian	<i>n</i>	1,016	1,526	1,268	3,810
			row %	26.67	40.05	33.28	100.00
		African American	<i>n</i>	6	4,644	1,574	6,224
	Women	Caucasian	row %	0.10	74.61	25.29	100.00
			<i>n</i>	1,264	1,653	1,655	4,572
		African American	row %	27.65	36.15	36.20	100.00
Total			<i>N</i>	3,179	20,385	9,481	33,045
			Total row %	9.62	61.69	28.69	100.00

Note. ED = emergency department.

(Guck, Kavan, Elsasser, & Barone, 2001; Sesso, Kawachi, Vokonas, & Sparrow, 1998).

## Method

We reviewed all ICD–9 discharge psychiatric diagnoses of 33,045 Caucasian and African American patients age 15 years and older who entered and were discharged from three hospital EDs over a 6-month period. No Caucasian or African American patients who met the age criterion were excluded. The University of Mississippi School of Medicine IRB exempted this study from formal human participants committee review because it involved an anonymous review of archival data. One hospital was a rural public medical–surgical hospital with 97 beds in a midwestern state that contracted on an individual basis with nonhospital physicians to staff the ED. None of the ED physicians at the rural hospital was board certified in emergency medicine. The second hospital was a university teaching hospital with 665 beds in a southern state. There were 12 rotating full-time faculty members in the university ED, 24 emergency medicine residents, and numerous other professionals such as nurses and nurse practitioners. All faculty physicians were board certified or board prepared in emergency medicine. The third ED was in a private hospital with 564 beds in the same city as the teaching hospital. Twelve externally contracted physicians (2 were emergency medicine board certified), along with several family medicine residents, staffed this hospital ED. The city in which the latter two hospitals were located had a population of about 185,000, of whom approximately 28% were Caucasian and 71% were African American (U.S. Census Bureau, 2000).

The demographic data for each ED are presented in Table 1 as a function of two age groups (see age group discussion below). The mean age was 36.85 years (range = 15–100). Men represented 41.59% of the sample ( $n = 13,745$ ), and women represented 58.41% of the sample ( $n = 19,300$ ). Caucasians composed 32.69% of the sample ( $n = 10,804$ ), and African Americans composed 67.31% of the sample ( $n = 22,241$ ). Only 20 rural ED patients were African American (0.63% of the rural patients). We excluded other racial groups in our analyses because there were only 166 patients of other races or nationalities in the entire data set (approximately 0.40%).

## Results

### Psychiatric Diagnoses

The percentage of patients who received at least one psychiatric diagnosis was 5.27% (1,741 of 33,045). All ICD–9 psychiatric diagnoses were included (numbers 290–319). Of the 1,741 patients who received a diagnosis, 292 (16.77%) received two or more psychiatric diagnoses. Among patients receiving at least one psychiatric diagnosis, the mean number of psychiatric diagnoses was 1.24 (2,153 diagnoses given to 1,741 patients;  $SD = 0.62$ , range = 1–7).

The percentages of all patients with one or more of the five diagnoses of interest were as follows: mood<sup>3</sup> = 0.78%, anxiety<sup>4</sup> = 1.18%, tobacco dependence<sup>5</sup> = 0.23%, psychosis<sup>6</sup> = 0.97%, and SUDS<sup>7</sup> = 2.11%. The 1,484 patients in these five diagnostic groups had 1,889 diagnoses (or 88% of all psychiatric diagnoses given). The relative frequencies of these five diagnostic groups were as follows: mood = 17.32%, anxiety = 26.28%, tobacco use disorder = 5.12%, psychosis = 21.29%, and SUDS = 46.90% (the total sums to more than 100% because patients can have more than one diagnosis). The psychiatric comorbidity rate of patients with one of these five diagnoses was 25.14%.

Psychiatric diagnoses were analyzed in logistic regressions (Hosmer & Lemeshow, 1989) with gender, race, and age as cate-

<sup>3</sup> The mood disorder ICD codes were 296–296.99 (mood-related psychoses), 300.4 (neurotic depression), and 311 (depressive disorder NEC).

<sup>4</sup> The anxiety ICD codes were 300.0–300.09 (anxiety disorders such as panic disorder and generalized anxiety disorder) and 300.2–300.3 (phobic and obsessive disorders).

<sup>5</sup> The tobacco use disorder ICD code was 305.1.

<sup>6</sup> The psychosis ICD codes were 290–295.95 and 297–299.91.

<sup>7</sup> The SUDS ICD codes were 303–305.03 and 305.2–305.93.

gorical covariates. The six psychiatric outcomes (all dichotomous variables) were as follows: psychiatric diagnosis (any psychiatric diagnosis), mood disorders, anxiety disorders, tobacco use disorder, SUDS, and psychotic disorders.

We first created five age groups to match those used in the CDC study (McCaig & Ly, 2002): Age Group 1 = 15–24 years, Age Group 2 = 25–44 years, Age Group 3 = 45–64 years, Age Group 4 = 65–74 years, and Age Group 5 = 75–100 years. In the initial full logistic regression analysis model in which psychiatric diagnosis (yes–no) was analyzed, the age (five groups), race, and gender covariates were entered in three blocks. In the first block, age, gender, and race were entered. In the second block, the three two-way interactions (e.g., Gender  $\times$  Race) were entered, and in the third block, the three-way interaction was entered. None of the interaction terms significantly contributed to goodness of fit and so the model was reduced to a single block of the main effects of the three covariates.

We then examined psychiatric rates across the age groups. The psychiatric rates were the lowest in the youngest age group and then leveled off among the older age groups. The percentage of patients with a psychiatric diagnosis in each age group was as follows: Age Group 1 = 3.40%, Age Group 2 = 6.12%, Age Group 3 = 5.80%, Age Group 4 = 5.38%, and Age Group 5 = 6.32%. Because it appeared that the four older age groups did not significantly vary in psychiatric rates, we compared two logistic regression models, one with gender, race, and age with five groups to a reduced model comprised of gender, race and age with two groups. The first age group comprised individuals age 15–24 years, and the second age group included individuals age 25–100 years. The Hosmer–Lemeshow test ( $p = .84$ ) indicated an excellent fit for the first model (five age groups) as well as for the second model (two age groups;  $p = .70$ ). Because the two age group models produced results that were easier to interpret and summarize, the final model we selected was the reduced model with gender, race, and age (two groups) entered as main effects.

In the subsequent logistic regression analyses, women served as the reference group for the gender variable, African Americans served as the reference group for the race variable, and the older age group served as the reference group for the age variable. Although the odds ratios are presented in the context of the designated reference group, for consistency purposes, we discuss the odds ratios in terms of the group that had the higher odds (which requires at times presenting the inverse of the obtained odds ratio).

#### *Presence–Absence of a Psychiatric Disorder*

In the analysis of psychiatric diagnoses (yes–no), the Hosmer–Lemeshow test ( $p = .69$ ) indicated a good model fit for the main effects. The percentages of patients receiving a psychiatric diagnosis are indicated in parentheses. Age was a significant predictor of presence–absence of a psychiatric disorder, Wald's  $\chi^2(1, N = 33,045) = 68.93, p < .001$  (odds ratio [OR] = 0.59, 95% confidence interval [CI] = 0.52–0.67). The odds of the older age group (6.00%) having a psychiatric diagnosis were 70% greater than the odds of the younger age group (3.40%). The odds of having a psychiatric diagnosis were 38% greater for men (6.35%) than women (4.50%), Wald's  $\chi^2(1, N = 33,045) = 43.06, p < .001$  (OR = 1.38, 95% CI = 1.26–1.53). The odds of Caucasians

(7.69%) having a psychiatric diagnosis were 85% greater than that of African Americans (4.09%), Wald's  $\chi^2(1, N = 33,045) = 151.88, p < .001$  (OR = 1.85, 95% CI = 1.68–2.04).

#### *Mood Disorders*

The Hosmer–Lemeshow test ( $p = .69$ ) of the main effects indicated a good model fit. Age was a significant predictor of presence–absence of a mood disorder, Wald's  $\chi^2(1, N = 33,045) = 6.54, p < .05$  (OR = 0.67, 95% CI = 0.49–0.91). The odds of the older group (0.87%) having a mood disorder diagnosis were 50% greater than that of the younger group (0.54%). Mood diagnosis rates also varied by gender (men = 0.59%, women = 0.91%), Wald's  $\chi^2(1, N = 33,045) = 13.57, p < .001$  (OR = 0.61, 95% CI = 0.47–0.79). The odds that women would have a mood disorder diagnosis were 64% greater than that of men. The odds that Caucasians (1.30%) would have a mood disorder diagnosis were 2.47 times that of African Americans (0.53%), Wald's  $\chi^2(1, N = 33,045) = 51.05, p < .001$  (OR = 2.47, 95% CI = 1.93–3.16).

#### *Anxiety Diagnoses*

The Hosmer–Lemeshow test indicated an adequate model fit ( $p = .25$ ). The odds of Caucasians (1.98%) having an anxiety diagnosis were 2.51 times that of African Americans (0.79%), Wald's  $\chi^2(1, N = 33,045) = 79.61, p < .001$  (OR = 2.51, 95% CI = 2.50–3.10). The odds of women (1.44%) having an anxiety diagnosis were 87% greater than that of men (0.82%), Wald's  $\chi^2(1, N = 33,045) = 30.86, p < .001$  (OR = 0.54, 95% CI = 0.43–0.67). The older group (1.37%) had approximately 80% greater odds of having an anxiety diagnosis than the younger age group (0.71%), Wald's  $\chi^2(1, N = 33,045) = 18.20, p < .001$  (OR = 0.56, 95% CI = 0.43–0.73).

#### *Tobacco Use Disorder*

The Hosmer–Lemeshow test indicated a good model fit ( $p = .76$ ). The odds of Caucasians (0.56%) receiving a diagnosis of tobacco use disorder were 7 times greater than that of African Americans (0.07%), Wald's  $\chi^2(1, N = 33,045) = 48.19, p < .001$  (OR = 7.10, 95% CI = 4.08–12.36). The odds of men (0.32%) receiving a diagnosis of tobacco use disorder were 73% greater than that of women (0.17%), Wald's  $\chi^2(1, N = 33,045) = 5.58, p < .05$  (OR = 1.73, 95% CI = 1.10–2.74). The older age group (0.28%) had approximately 2.4 times the odds of having a tobacco use disorder diagnosis as the younger age group (0.10%), Wald's  $\chi^2(1, N = 33,045) = 5.97, p < .05$  (OR = 0.42, 95% CI = 0.21–0.84).

#### *SUDS*

The Hosmer–Lemeshow test indicated an adequate model fit ( $p = .24$ ). The odds of Caucasians (3.00%) receiving a SUDS diagnosis were 61% greater than the odds of African Americans (1.68%), Wald's  $\chi^2(3, N = 33,045) = 37.74, p < .001$  (OR = 1.61, 95% CI = 1.38–1.88). The odds of men (3.66%) having a SUDS diagnosis were 3.63 times the odds of women (1.00%), Wald's  $\chi^2(1, N = 33,045) = 227.23, p < .01$  (OR = 3.63, 95% CI = 3.07–4.30). The older group (2.50%) had roughly twice the

odds of having SUDS diagnoses as the younger group (1.10%), Wald's  $\chi^2(3, N = 33,045) = 44.94, p < .001$  (OR = 0.47, 95% CI = 0.38–0.58).

### *Psychosis Diagnoses*

The Hosmer–Lemeshow test indicated a good model fit ( $p = .55$ ). The odds of the older patients (1.16%) receiving a psychosis diagnosis were 2.27 times that of younger patients (0.47%), Wald's  $\chi^2(1, N = 33,045) = 25.98, p < .001$  (OR = 0.44, 95% CI = 0.32–0.60). The odds of Caucasians (1.49%) having a psychosis diagnosis were about twice that of African Americans (0.71%), Wald's  $\chi^2(1, N = 33,045) = 31.56, p < .001$  (OR = 1.98, 95% CI = 1.66–2.50). The odds of men (1.08%) having a psychosis diagnosis did not differ from the odds of women having a psychosis diagnosis (0.89%).

To facilitate the comparison of the psychosis rates with national rates, we examined two components (schizophrenia and organic psychoses) of the psychosis category. Among patients age 18–54 years, the schizophrenia rate was 0.32%. African Americans (0.33%) were diagnosed significantly more often with schizophrenia than Caucasians (0.19%),  $\chi^2(1, N = 33,045) = 4.60, p < .05$ . Among patients age 18 years and older, the organic psychosis rate was 0.28%, and among patients age 55 years and older, the organic psychosis rate was 1.07%. Caucasians (0.55%) were diagnosed significantly more often with organic psychoses than African Americans (0.16%),  $\chi^2(1, N = 33,045) = 37.45, p < .001$ .

The national prevalence rates of organic psychotic disorders were estimated from the ECA study (Robins & Regier, 1991; see p. 299), which provided several estimates of the rates of organic psychotic disorders. The estimates were based on two age ranges and two levels of diagnostic criteria. The most conservative estimate (with only the most severe impairment levels) of the organic psychosis rate among individuals age 18 years and older was 0.85%, whereas the more liberal approach (which included the more mild impairments) produced a prevalence estimate of 7.05%. For individuals age 55 years and older, the conservative organic psychosis rate was estimated to be 2.26%, whereas the more liberal approach produced an estimate of 15.01%. Among patients age 18 years and older in the present study, the organic psychosis rate was 0.28%. This represents a diagnostic ratio of about 3:1 when compared with the conservative ECA study's estimate of 0.85% and a diagnostic ratio of 25:1 when compared with the ECA study's liberal estimate of 7.05%. Among patients age 55 years and older in the present study, the organic psychosis rate was 1.07%, which represents a diagnostic ratio of 2:1 when compared with the ECA study's conservative estimate of 2.26% and diagnostic ratio of 14:1 when compared with the ECA study's liberal estimate of 15.01%.

The second component of the psychosis category involved diagnoses of schizophrenia. The Surgeon General's Mental Health Report (USDHHS, 1999) estimates the rate of schizophrenia among people age 18–54 years to be 1.30%. In the present study, the schizophrenia rate was 0.32% among patients age 18–54 years. The ratio of the national rate to present study rates was 4.06:1.00.

### *All Psychiatric Diagnoses and Injuries*

We created the following four ICD–9 injury groups used by the CDC (e.g., McCaig & Ly, 2002): no injuries ( $n = 27,807$ ),

self-inflicted injuries ( $n = 87$ ), other-inflicted injuries ( $n = 716$ ), and accidental injuries (4,435). Because of our a priori theoretical interest in the relationship of race to type of injury, we examined psychiatric (yes–no) rates in a logistic regression using injury group (self-injury group was designated as the reference group) and race (African Americans were designated as the reference group) as covariates. Injury group and race were entered as covariates in the first block, and the interaction of Injury Group  $\times$  Race was entered in the second block. Because the interaction term did not significantly improve the fit of the model, we used the reduced model with race and injury group as the two covariates. For the reduced model, the Hosmer–Lemeshow test indicated an adequate fit ( $p = .19$ ). Race was again a significant predictor of psychiatric rates. Caucasians (7.69%) had twice the odds of having a psychiatric diagnosis as African Americans (4.09%), Wald's  $\chi^2(3, N = 33,045) = 201.88, p < .001$  (OR = 2.04, 95% CI = 1.85–2.25). Injury group was also a significant predictor of psychiatric rates, Wald's  $\chi^2(3, N = 33,045) = 306.87, p < .001$ . The odds of self-injury patients (55.17%) having a psychiatric diagnosis were 21 times greater than that of no injury patients (5.31%), Wald's  $\chi^2(3, N = 33,045) = 192.51, p < .001$  (OR = 0.05, 95% CI = 0.03–0.07). The odds of self-injury patients (55.17%) having a psychiatric diagnosis were 8.8 times greater than that of other-inflicted injury patients (11.31%), Wald's  $\chi^2(3, N = 33,045) = 75.93, p < .001$  (OR = 0.11, 95% CI = 0.07–0.19). The odds of self-injury patients (55.17%) having a psychiatric diagnosis were 42.0 times greater than that of accidental injury patients (3.07%), Wald's  $\chi^2(3, N = 33,045) = 249.01, p < .001$  (OR = 0.02, 95% CI = 0.02–0.04).

To verify our expectation that individuals who self-injured were more likely to have SUDS, mood, anxiety, and psychotic disorders than individuals who experienced other types of injuries, we examined the relative frequencies of these four disorders as a function of injury type. As expected, mood disorders were diagnosed much more frequently among patients with self-injuries,  $\chi^2(3, N = 33,045) = 767.23, p < .001$ . The percentages of patients with a mood disorder diagnosis in each injury group were as follows: no injury = 0.81%, self-injury = 26.44%, other-inflicted = 0.00%, and accidental injury = 0.20%. Although anxiety diagnoses varied significantly across injury group, anxiety diagnoses did not occur more frequently among self-injury patients than among the no injury patients,  $\chi^2(3, N = 33,045) = 53.98, p < .001$ . The percentages of patients with an anxiety disorder diagnosis in each injury group were as follows: no injury = 1.37%, self-injury = 1.15%, other-inflicted = 0.56%, and accidental injury = 0.11%. Psychotic disorder diagnoses also were much more frequent among self-injury patients than among the remaining injury groups,  $\chi^2(3, N = 33,045) = 87.40, p < .001$ . The percentages of patients with a psychosis diagnosis in each injury group were as follows: no injury = 1.06%, self-injury = 9.20%, other-inflicted = 0.28%, and accidental injury = 0.32%. SUDS diagnoses also were more clearly associated with self-injuries than with any other type of injury,  $\chi^2(3, N = 33,045) = 87.40, p < .001$ . The mean SUDS rates in each injury group were as follows: no injury = 1.80%, self-injury = 25.29%, other-inflicted = 10.06%, and accidental injury = 2.28%. The tobacco use disorder rates did not vary significantly across injury group,  $\chi^2(3, N = 33,045) \leq 1.00, p < .50$ . The tobacco use disorder rates in the

Table 2  
*Percentage of Patients in Each Medical Category With Either a Primary or a Secondary Psychiatric Diagnosis*

Patients with a psychiatric diagnosis as primary				Patients with a psychiatric diagnosis as secondary			
Medical category	% <sup>a</sup>	Rank	<i>n</i>	Medical category	% <sup>b</sup>	Rank	<i>n</i>
Circulatory	12.61	1.0	104	Circulatory	13.71	1.5	71
Endocrine	7.64	2.0	63	Digestive	13.71	1.5	71
Respiratory	3.27	3.0	27	Endocrine	9.65	3.0	50
Digestive	2.42	4.5	20	Respiratory	9.46	4.0	49
Musculoskeletal	2.42	4.5	20	Musculoskeletal	7.92	5.0	41
Nervous system	1.58	6.0	13	Infections	6.18	6.0	32
Infections	1.33	7.0	11	Nervous system	4.63	7.5	24
Blood	1.09	8.0	9	Congenital	4.63	7.5	24
Genitourinary	0.49	9.5	4	Genitourinary	4.05	9.0	21
Skin	0.49	9.5	4	Blood	2.12	10.5	11
Congenital	0.12	11.5	1	Skin	2.12	10.5	11
Neoplasms	0.12	11.5	1	Pregnancy	1.35	12.0	7
Pregnancy	0.00	13.0	0	Neoplasms	0.39	13.0	2

<sup>a</sup> Percentage of patients with a primary psychiatric diagnosis and no secondary psychiatric diagnosis. <sup>b</sup> Percentage of patients with a secondary psychiatric diagnosis and no primary psychiatric diagnosis.

injury groups were as follows: no injury = 0.24%, self-injury = 0.00%, other-inflicted = 0.42%, and accidental injury = 0.16%.

#### *Psychiatric Rates Within Medical Categories*

We recreated 13 of the 19 medical diagnostic categories listed in the ICD-9 (see ICD-9 for full descriptions of these categories). The categories we excluded were as follows: (a) injuries (analyzed above); (b) mental disorders; (c) perinatal problems; (d) signs, symptoms and ill-defined conditions; (e) V codes; and (f) E codes. Table 2 lists the medical categories, the percentages of patients in each category receiving a psychiatric diagnosis, the percentages of Caucasians and African Americans with a psychiatric diagnosis in each medical category, and the mean ages of the patients with a psychiatric diagnosis.

There were 22,724 patients with at least one medical diagnosis in these 13 medical categories. Among these 22,724 patients, there were 809 patients (3.56%) with at least one psychiatric diagnosis. The endocrine category<sup>8</sup> had the highest psychiatric frequency (6.32%), and the five psychiatric diagnoses of interest (either alone or in combination) were present in 164 of 171 (96.00%) endocrine patients with a psychiatric diagnosis. The rates of the five diagnoses of interest were as follows: (a) SUDS = 56 (2.07% of all endocrine patients and 32.75% of all endocrine patients with a psychiatric diagnosis), (b) psychotic = 46 (1.70% of all endocrine patients and 27.00% of all endocrine patients with a psychiatric diagnosis), (c) anxiety = 40 (1.48% of all endocrine patients and 23.40% of endocrine patients with a psychiatric diagnosis), (d) mood = 27 (1.00% of all endocrine patients and 15.80% of endocrine patients with a psychiatric diagnosis), and (e) tobacco use disorder = 4 (0.15% of all endocrine patients and 2.34% of endocrine patients with a psychiatric diagnosis). The numbers add to more than 164 because patients can have more than one diagnosis.

The patients with a circulatory system diagnosis had the second highest psychiatric rate (5.82%) and a mean age of 53.87 years, which was similar to the mean age of 50.32 among the endocrine

patients. There were 253 patients (98.44%) who had one or more of the five diagnoses of interest among the 257 circulatory system patients with a psychiatric diagnosis. The rates of the five diagnoses among the circulatory system patients were as follows: (a) SUDS = 79 (1.79% of all circulatory patients and 30.74% of circulatory patients with a psychiatric diagnosis), (b) psychosis and anxiety = 64 (1.45% of all circulatory patients and 25.00% of circulatory patients with a psychiatric diagnosis), (c) mood disorders = 39 (0.88% of all circulatory patients and 15.18% of circulatory patients with a psychiatric diagnosis), and (d) tobacco use disorder = 7 (0.16% of all circulatory patients and 2.72% of circulatory patients with a psychiatric diagnosis).

#### *Psychiatric Diagnoses Coded as Primary, Secondary, and Tertiary*

There were 1,741 patients with at least one psychiatric diagnosis, and of these, 541 (31.07%) did not have a medical diagnosis. The total number of psychiatric diagnoses given to these 1,741 patients was 2,153 ( $M = 1.24$ ). There were 1,593 patients that were given a psychiatric diagnosis as either the primary, secondary, and/or tertiary diagnosis. This represented 91.50% of all patients who were given at least one psychiatric diagnosis. The total number of psychiatric diagnoses given as primary, secondary, and tertiary was 1,977, which represented 92.00% of all psychiatric diagnoses given. There were 825 patients who received a psychiatric diagnosis as the primary diagnosis, which represented 47.39% of all patients who received at least one psychiatric diagnosis and 2.50% of all primary diagnoses. These patients accounted for a total of 1,105 psychiatric diagnoses (or 56.00% of all psychiatric diagnoses given). Of these 825 patients with a primary psychiatric diagnosis, 527 (63.88%) did not receive a medical diagnosis. Of these 825 patients, 636 had only one psychiatric

<sup>8</sup> The full category name is endocrine, nutritional, metabolic, and immunity disorders.

diagnosis, and of these 636 patients, 401 (63.05%) had no medical diagnoses. There were 518 patients who received a psychiatric diagnosis as the secondary diagnosis and who did not have a psychiatric diagnosis as the primary diagnosis (55 also received a psychiatric diagnosis as the tertiary diagnosis). There were 250 patients who received a psychiatric diagnosis as the tertiary diagnosis (with no psychiatric diagnosis as primary or secondary).

We examined the rates of the five psychiatric disorders of interest among patients with a single psychiatric diagnosis that was the primary diagnosis. The percentages were as follows: anxiety = 30.25%, SUDS = 25.86%, psychosis = 16.14%, mood = 9.56%, and tobacco use disorder = 0.16%. These five diagnoses accounted for 81.97% of all psychiatric diagnoses given as the primary diagnosis. The rates among patients with a psychiatric diagnosis as the secondary diagnosis (with no primary psychiatric diagnosis but possibly a tertiary diagnosis) were as follows: SUDS = 44.40%, anxiety = 22.20%, psychosis = 15.06%, mood = 12.16%, and tobacco use disorder = 5.41%. These five diagnoses accounted for 99.23% of all psychiatric diagnoses given as the secondary (and possibly tertiary) diagnosis.

The frequencies of the 13 medical category diagnoses among Caucasian and African American patients with a primary or a secondary psychiatric diagnosis are presented in Table 3. The Spearman Rank Order correlation coefficient ( $r_s = .93$ ) indicated that the medical category rankings for patients with a primary psychiatric diagnosis were very similar to the medical category rankings for patients with a psychiatric diagnosis as the secondary diagnosis (and no primary psychiatric diagnosis).

The percentage of Caucasians (3.73%) who received a psychiatric diagnosis as the primary diagnosis was significantly higher than the percentage of African Americans (1.90%),  $\chi^2(1, N = 33,045) = 100.33, p < .001$ . Among patients who did not receive a psychiatric diagnosis as the primary diagnosis, Caucasians (2.67%) were more likely to receive a psychiatric diagnosis as the secondary diagnosis than African Americans (1.29%),  $\chi^2(1, N = 33,045) = 42.46, p < .001$ . Among patients who did not receive a psychiatric diagnosis as primary or secondary, Caucasians (1.16%) were more likely to receive a psychiatric diagnosis than African Americans (0.61%),  $\chi^2(1, N = 33,045) = 26.50, p < .001$ .

## Discussion

Psychiatric diagnoses composed 2.50% of all primary diagnoses, a rate similar to that reported by the CDC (e.g., McCaig & Ly, 2002). When all psychiatric diagnoses were included, the rate more than doubled to 5.27%, although this is still far below the national psychiatric rate of 20%–28% (USDHHS, 1999). Of the patients who received a psychiatric diagnosis, 92% received it as the primary, secondary, or tertiary diagnosis, although almost half of all patients who received a psychiatric diagnosis received it as the primary diagnosis. Mood, anxiety, SUDS, tobacco use disorder, and psychotic disorders accounted for 88% of all psychiatric diagnoses. SUDS and anxiety disorders were the most frequently occurring diagnoses overall, and they were the most frequently given primary psychiatric diagnoses. However, among self-injury patients, the most frequently occurring diagnoses were SUDS and mood disorders.

The extent of this observed psychiatric underdiagnosis can be better appreciated when it is examined in the context of national rates. The national rates of the five disorders versus present study rates are as follows: (a) mood disorders = 4.00%–7.00% (depending on the age group; USDHHS, 1999) versus 0.70% (diagnostic ratios of 5.71:1.00 to 10.00:1.00), (b) anxiety = 11.00%–16.00% (depending on the age group; USDHHS, 1999) versus 1.19% (diagnostic ratios of 9.24:1.00 to 13.45:1.00), (c) SUDS = 7.00% (among individuals 12 and older; Substance Abuse and Mental Health Services Administration, 2002) versus 2.05% (diagnostic ratio of 3.41:1.00), (d) tobacco use disorder = 25.00% (CDC, 1999) versus 0.23% (diagnostic ratio of 108.70:1.00), (e) organic psychosis = obtained diagnostic ratios ranging from 3:1 (0.85% vs. 0.28%) to 25:1 (7.05% vs. 0.28%) depending on age group and method of estimation (see Results section), and (f) schizophrenia (among patients 18–54 years in age) = 1.30% (USDHHS, 1999) versus 0.32% (diagnostic ratio = 4.06:1.00). The psychosis and schizophrenia results clearly indicate that the psychiatric underdiagnosing in ED patients is not limited to the less severe pathologies.

Although Caucasians received more psychosis diagnoses overall and more organic psychosis diagnoses than African Americans,

Table 3  
Race Differences in Psychiatric Rates Across Medical Categories

Medical category	N	Mean psychiatric rate (%)	Race		Race difference		Mean age
			Caucasian (%)	African American (%)	$\chi^2(1)$	p	
Endocrine	2,707	6.32	9.73	4.85	22.83	.001	49.83
Circulatory system	4,419	5.82	7.35	5.02	9.87	.01	55.37
Blood	617	5.35	13.41	4.11	12.15	.001	44.73
Digestive system	2,760	4.89	6.54	3.94	9.31	.01	44.02
Congenital anomalies	43	4.65	0.00	8.00	1.64	ns	46.00
Nervous system	1,953	3.48	3.78	3.47	1.00	ns	42.41
Infectious and parasitic disease	3,074	3.19	6.19	2.56	18.84	.001	38.18
Musculoskeletal system	3,841	2.79	4.64	1.72	27.98	.001	44.23
Respiratory system	5,337	2.72	5.60	1.64	62.45	.001	43.05
Neoplasms	335	2.39	4.41	1.01	4.02	.05	52.75
Genitourinary system	3,300	1.70	3.44	1.13	19.68	.001	43.54
Complications of pregnancy	781	1.67	1.14	1.82	1.00	ns	24.62
Skin and subcutaneous tissue	1,518	1.52	3.13	0.91	9.95	.01	37.70

African Americans received more schizophrenia diagnoses than Caucasians. Several other studies have reported that African Americans are diagnosed with schizophrenia more frequently than Caucasians (Snowden & Holschuh, 1992; Strakowski et al., 1995, 1996). One factor that may contribute to the higher schizophrenia rate is diagnostician error, which leads to an overdiagnosis of schizophrenia and an underdiagnosis of disorders such as major depression with psychotic features among African Americans (Coleman & Baker, 1994; Pavkov, Lewis, & Lyons, 1989).

The large discrepancy between the national psychiatric rate of 20% and the overall rate of 5.27% obtained in this study suggests that a significant underdiagnosis is occurring in EDs. However, this underdiagnosis may be much greater than this discrepancy suggests, because several studies have found the rates of some individual disorders among ED patients to be higher than the total national psychiatric prevalence rate. For example, Schriger et al. (2001) reported mood disorder rates upward of 40% among ED patients, which is higher than the national psychiatric rate of 20% and the national mood disorder rate of 7%. This is also far higher than the mood disorder rate of 0.70% obtained in the present study.

Tobacco dependence is one of the leading preventable causes of morbidity and mortality in the United States today and is responsible for more than 400,000 deaths annually (CDC, 1999, 2001). The tobacco use disorder rate of 0.23% in the present study is less than 1/100 of the national tobacco dependence rate (CDC, 1999). It could be argued that the very low tobacco use disorder rate makes sense if ED physicians are unlikely to give a tobacco use disorder diagnosis to patients who present with a medical condition unrelated to tobacco use (such as a fracture) but are more likely to give a tobacco use disorder diagnosis to patients who present with medical diagnoses such as circulatory or respiratory problems or neoplasms that may be related to tobacco use. However, we found no evidence to support this hypothesis. For example, the tobacco use disorder rate among patients with a circulatory diagnosis was 0.16%, among neoplasm patients the tobacco use disorder rate was 1.19%, and among respiratory patients the tobacco use disorder rate was 0.82%, all of which are far below the national rate of approximately 25%. Because brief physician advice to quit smoking can be an effective intervention among Caucasians (Miller, Smith, DeBusk, Sobel, & Taylor, 1997; Sawicki, Didjurgeit, Muhlhauer, & Berger, 1993) and African Americans (C. D. Williams, Lewis-Jack, Johnson, & Adams-Campbell, 2001), it would be well worth the time and effort of ED physicians to diagnosis tobacco dependence and address cessation issues.

Informal interviews with more than 50 ED physicians suggest several reasons why psychiatric disorders are underdiagnosed. First, the ED physicians reported that they focus almost exclusively on the presenting physical complaint because of overcrowding and a lack of psychiatric expertise. Second, many ED physicians cited inability to provide continuity of care for their patients as a central reason for their reluctance to diagnosis mental disorders and prescribe medications such as antidepressants. Third, the majority of these ED physicians expressed the belief that many mental disorders are relatively unimportant threats to health. Although it might be reasonable to expect ED physicians to lack the psychiatric expertise or the time or interest to diagnose the less severe psychiatric disorders, such as obsessive-compulsive disorder, it is reasonable to expect ED physicians to be able to diagnose

the more severe psychiatric disorders such as psychosis. However, our data show that ED physicians are underdiagnosing all psychiatric problems, including the most severe disorders such as psychosis.

The belief that psychiatric problems are relatively minor threats to health is not supported by research indicating that all mental disorders rank second behind all cardiovascular diseases as a cause of lost years of productive life (Murray & Lopez, 1996). The Emergency Medicine Core Content Task Force II, which published the "Model of the Clinical Practice of Emergency Medicine," also does not share the view that psychiatric conditions are minor health threats (Hockberger et al., 2001). This task force listed 18 categories of medical conditions, and one of those areas, "Psychobehavioral Disorders," deals with psychiatric conditions. Of the 35 individual psychobehavioral disorders listed, 57% ( $n = 20$ ) were designated as either *emergent* or *critical*.

The observed psychiatric underdiagnosis raises the question of whether EDs are meeting their EMTALA requirement to screen for potentially serious psychiatric disorders (Moy, 2000). In our discussions with ED physicians, we found that the majority was not aware that EMTALA includes psychiatric disturbances and SUDS as potential medical emergencies. Furthermore, several of the ED physicians argued that if the routine standard of care in their hospitals was not to inquire about psychiatric problems, then the failure to diagnose a psychiatric disorder was probably not an EMTALA violation. However, the reluctance to address psychiatric issues is difficult to support on medical, ethical, and legal grounds. For example, ED patients experiencing a psychiatric and/or medical emergency—such as battered wives and sexually abused children, homicidal and suicidal patients, and substance abusing patients—often will not volunteer information about their crises because of fears of negative consequences (e.g., further abuse, legal charges, or commitment; Klitzman & Greenberg, 2002; Magura & Kang, 1996; Morrison & Downey, 2000; Rew & Esparza, 1990). The failure to initiate inquiries into basic psychosocial issues can lead to disastrous consequences for some patients (L. S. Williams, 1995).

Age was a strong predictor of psychiatric rates. The older patients (6.00% psychiatric rate) were significantly more likely to receive any psychiatric diagnosis and more mood, anxiety, tobacco, psychosis, and SUDS diagnoses than the younger patients (3.40% psychiatric rate). Kunen, Mandry, Perret, and Cutlip (2003) examined the psychiatric rate among ED patients age 9–17 years and found a psychiatric rate of 2.82%. The present study and that of Kunen et al. (2003) suggest that as age decreases, the tendency of ED physicians to ignore psychiatric problems increases.

Gender was a moderately good predictor of psychiatric rates. Overall, men had more psychiatric diagnoses than women, which is contradictory to the prevalence rates reported in numerous community studies (e.g., Kessler et al., 1994; Linzer et al., 1996; Robins & Regier, 1991). This gender effect, however, was largely due to the much higher SUDS rate among men (3.66%) than among women (1.00%). Men were diagnosed more often with tobacco dependence than women, whereas women were diagnosed more often with mood and anxiety disorders. Men and women did not differ in psychosis rates. Patients who are experiencing a significant substance abuse episode (predominantly male problems) are more likely to be taken to an ED because of fear of the

health consequences of an overdose than are patients experiencing a significant mood (unless suicidal ideation is present) or anxiety disorder (predominately female problems).

Race was a powerful predictor of psychiatric diagnoses. The odds of Caucasians having a psychiatric diagnosis were 1.85 times that of African Americans. The odds of Caucasians having each of the five psychiatric diagnoses, compared with African Americans, were as follows: mood disorder (odds = 2.47), anxiety disorder (odds = 2.51), tobacco use disorder (odds = 7.00), psychosis (odds = 2.00), and SUDS (odds = 1.68). Almost twice as many Caucasians as African Americans received a psychiatric diagnosis as the primary diagnosis.

Why did African Americans have lower psychiatric rates than Caucasians? First, it is possible that African Americans have fewer psychiatric disorders than Caucasians. However, because a much greater percentage of African Americans (22.10%) live in poverty than Caucasians (9.40%) (U.S. Census Bureau, 2001), and because there is a strong correlation between poverty and illness (Adler et al., 1994; Colhoun, Hemingway, & Poulter, 1998; Holzer et al., 1986; Kaplan & Keil, 1993; Moore & Harrisson, 1995), it would be more reasonable to expect the rate of psychiatric disorders among African Americans to be as high (or higher) than the rate among Caucasians.

Second, the lower psychiatric rates among African Americans may have resulted from racial differences in symptom complexes for the same disorders (Appendix I of the *Diagnostic and Statistical Manual of Mental Disorders*; 4th ed.; American Psychiatric Association, 1994). Caucasian physicians, who compose the majority of ED physicians, may be more familiar with the mental disorder symptoms of Caucasians and may be more comfortable diagnosing Caucasians.

Third, the lower psychiatric rates among African Americans also may reflect tendencies of African Americans to be less trusting of (Doescher, Saver, Franks, & Fiscella, 2000; Whaley, 2001) and less willing to disclose emotional problems to individuals of different racial groups (Jenkins, 1990; Morrison & Downey, 2000).

Fourth, physician bias also may have contributed to the race differences in psychiatric rates (Snowden, 2003). We also note that because the patient population in our study was predominantly African American, our race results may differ from studies involving ED populations that are predominantly Caucasian.

Psychiatric rates varied significantly across injury group. The psychiatric rates were much higher in the self-injury group (55.17%) than in the other-inflicted injury group (11.31%) or in the accidental injury group (3.07%). As predicted, mood, SUDS, and psychotic disorders were diagnosed more frequently among the self-injury patients than among the remaining injury groups. The only discrepancy with our predictions was that the self-injury patients were not diagnosed more often with anxiety disorders than the remaining injury groups. The small number of anxiety disorder diagnoses among the self-injury patients is likely a result of physician sensitivity to the well-known associations of mood disorders (26% of self-injury patients had a mood disorder diagnosis) and SUDS (25% of self-injury patients had a SUDS diagnosis) to suicide (Cavanagh, Carson, Sharpe, & Lawrie, 2003), leading to a decreased focus on anxiety disorders. The high psychiatric rate among self-injury patients should increase ED physicians' willingness to screen for psychiatric disorders among patients who

self-injure, because psychiatric disorders are potent risk factors for future self-reinjury (Reiner et al., 1990; Sims et al., 1989).

Although there were no race differences in psychiatric rates across injury groups, Caucasians had higher psychiatric rates than African Americans in 9 of the 13 medical categories we examined. In the remaining four medical categories, there were no race differences. The four medical category diagnoses that had the highest psychiatric rates were: circulatory system (psychiatric rate = 5.82%); blood and blood forming organs (5.35%); digestive system (4.89%); and endocrine (4.85%). Because there is a great diversity of medical conditions within each category, it is difficult to determine why these medical categories had the highest psychiatric rates. In future studies, it would be worthwhile to determine how psychiatric rates vary with severity of medical diagnosis, and whether severity is a better predictor of psychiatric rates than medical category. Nonetheless, the consistent race differences in psychiatric rates across these nine medical categories reveal that the psychiatric race disparity is a relatively robust phenomenon.

The race differences in psychiatric rates we observed are not an isolated health care phenomenon. The Institute of Medicine study on race disparities in health care recently concluded that "A large body of published research reveals that racial and ethnic minorities experience a lower quality of health services, and are less likely to receive even routine medical procedures than are white Americans" (Smedly, Stith, & Nelson, 2003, p. 2).

The race disparity in psychiatric rates we observed in these three EDs is at odds with the conclusion reached in the Surgeon General's supplement on mental health and race: ". . . this Supplement finds enough evidence from many smaller studies to conclude that the overall rate of mental illness among minorities is similar to the overall rate of about 21% across the U.S. population" (USDHHS, 1999, p. 7). The race disparity is not limited to EDs, because minority patients also are less likely than Caucasians to have their mental disorders diagnosed in primary care settings (Borowsky et al., 2000).

Emergency medicine is at a crossroad in its development as a discipline. The historical origin of emergency medicine as a trauma specialty is clearly at odds with its developing role as a primary care provider that sees over 108 million people per year (McCaig & Ly, 2002). EDs need to expand their staffs to include mental health professionals such as psychologists, psychiatrists, substance abuse specialists, and social workers, because ED physicians may not have the training, interest, or time to deal with mental health issues. Identification of psychiatric problems in ED patients has the potential to reduce pain and suffering, decrease unnecessary medical expenses, increase the operating efficiency of EDs, and decrease return visits from high frequency ED users (Dyckman, Rosenbaum, Hartmeyer, & Walter, 1999; Okin et al., 2000).

The psychiatric underdiagnosing we have documented is potentially the most damaging for the more vulnerable minorities and the poor who rely on EDs for much of their primary health care needs. This underdiagnosing contributes to needless emotional suffering because many of the more common disorders, such as depression and anxiety, respond well to psychotherapy and pharmacological interventions (C. Brown & Schulberg, 1998; Vaswani, Linda, & Ramesh, 2003).

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