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Disparities in Access to healthcare: The Case of a Drug and Alcohol Abuse Detoxification Treatment Program among Minority Groups in a Texas Hospital

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ABSTRACT

The authors analyzed ethnic/racial disparities in healthcare access and Length of Stay (LOS) from a defined population of individuals seeking medical detoxification services at a hospital in Texas. Results indicated Blacks were more likely to be insured compared with Whites, mostly by public insurance, but this did not hold for Hispanics, who were about three times more likely to be uninsured compared with Blacks. In addition, the authors observed lower median of LOS in the Medicaid category within Hispanics. These results can be explained by aggressive case management, sociocultural barriers or discriminatory practices, both intentional and unintentional.

Key words: access, detoxification, disparities, Hispanic, insurance, length of stay

According to Healthy People 2010, *health disparities* are defined as differences that occur by gender, race or ethnicity, income or education level, disability, geographic location, or sexual orientation (U.S. Department of Health and Human Services 2000). The existence of racial and ethnic disparities in healthcare represents a failure of the healthcare system to provide equal, high-quality healthcare to all individuals regardless of ethnicity, race, and other factors. The publication of Healthy People 2010 advanced a goal for the elimination of all health disparities in the United States, and acknowledged that a comprehensive strategy incorporating research, education, policy changes, and community partnerships is fundamental to accomplishing this goal (U.S. Department of Health and Human Services). The Institute of Medicine report, "Unequal Treatment" (Smedley, Stith, and Nelson 2002) indicated healthcare workers need to learn the underlying causes of health disparities and to prepare themselves to care for diverse patient populations. Various researchers have developed models and delineated factors contributing to preventive-health behavior and the use of medical care. One of the best-known examples is the help-seeking model (Mechanic 1982), based on the theory of illness behavior, a general social psychological approach to understanding those factors that bring people to the physician and determining how effective that encounter will be. According to Mechanic, there are at least four ways that illnesses behavior can be studied: as a disposition of the person, a result of an interaction between personal and environmental factors in a community, as a decision-making process, or as the response to the health services system. Alternative models at the organizational level, which is the focus of this article, apply the framework of Bierman and her colleagues (1998) for access to care and health outcomes for very old adults. This was further developed by Carrillo et al. (2001) for Latino access to healthcare. This framework organizes

and clarifies means of access and barriers to care for Hispanics on three dimensions: *primary access* (people with health insurance); *secondary access* (people with health insurance who face institutional or structural barriers such as transportation, availability of services, and lack of information of health services); and *tertiary access* (people who face linguistic or cultural barriers during an appointment [Carrillo et al. 2001] or discrimination and stereotyping, as recognized by the "Unequal Treatment" report [Smith, Stedley, and Nelson 2002]).

In 2003, forty-five million people lacked health insurance in the US, and the numbers have continued to increase. Among minority groups, Hispanics are the least likely to have health insurance (32.7%), followed by of non Hispanic Blacks (19.6%) based on a 2-year average. On the other hand, only 11.1% of non Hispanic Whites did not have health insurance (U.S. Census Bureau 2004). In addition, minorities who have insurance are about three times as likely as non Hispanic Whites to be covered by publicly funded programs such as Medicaid. However, some healthcare providers refuse or restrict the number of Medicaid patients they will see (Smedley, Stith, and Nelson 2002).

Lack of health insurance coverage represents a major barrier to healthcare access and is associated with having poorer physical and mental health (Wu, Kouzis, and Schlenger 2003). Race and ethnicity are attributes or predisposing factors that can also affect access to mental-health services or substance abuse treatment (Snowden 2001; Wang, Demler, and Kessler 2002). Research indicates that racial and ethnic differences in perceptions about mental illness, treatment system biases, and reliance on voluntary support networks hamper treatment access (Dana 2002; Kales et al. 2000; Snowden 2001). According to the Office of Applied Studies (OAS) of the Substance Abuse and Mental Health Administration (SAMHSA), access to substance abuse treatment can be affected by race/ethnicity factors and urbanization of residence

among others (SAMHSA 1998). As a result, Blacks and Hispanics are likely to receive fewer mental health services or less substance abuse treatment than needed (Wells et al. 2001). Also, non Hispanic Blacks are more likely to use proportionately fewer outpatient mental health services than as non Hispanic Whites patients (Kales et al. 2000), regardless of access to private health insurance (Thomas and Snowden 2001). Research has shown that even when racial/ethnic minorities are insured at levels comparable with non Hispanic Whites, they tend to receive lower quality of service for the same condition (Smedley, Stith, and Nelson 2002).

Medical Detoxification is a process whereby individuals are systematically withdrawn from addictive drugs in an inpatient or outpatient setting, typically under the care of a physician. Detoxification is sometimes called a distinct treatment modality, but it is more appropriately considered a precursor to treatment because it is designed to treat the acute physiological effects of withdrawal. Medications are available for detoxification from opiates, cocaine, benzodiazepines, alcohol, barbiturates, and sedatives. In some cases, detoxification may be a medical necessity, and untreated withdrawal may be medically dangerous or even fatal (National Institute on Drug Abuse [NIDA] 2005).

The structure and organization of treatment providers can affect access to substance abuse treatment. For-profit treatment programs are more likely to provide treatment to clients with health insurance coverage or the ability to pay—clients who generally are not treated in publicly financed treatment programs (Wheeler and Nahra 2000). Publicly funded treatment facilities may not have sufficient capacity to provide services to all individuals who request treatment. Changes that increase staff burden, reduce or eliminate certain services, or lessen methadone availability are likely to erode patient access to substance abuse treatment programs (Friedmann, Alexander, and D'Aunno 1999). Too often, individuals with substance use

disorders end up going through short-term detoxification multiple times before beginning long-term treatment or relying on emergency departments of private and public hospitals for palliative treatment (McCarty et al. 2000; McGeary and French 2000; Wingerson et al. 2001). The 2002–2003 National Surveys on Drug Use and Health ranked Texas, one of the ten states with the lowest rate of substance abuse and the fewest dependence facilities, with only 7.15 percent of its population and 556 reported treatment facilities (SAHMSA 2005)

In the present study, we analyzed ethnic/racial disparities in healthcare insurance access; length of stay; alcohol; cocaine, opioid, multidrug abuse; and relapse from a defined population of adult individuals seeking medical detoxification services on a medical detoxification program at a community non profit hospital in Texas. The hypotheses tested were (1) Hispanics and non Hispanic Blacks are more likely to be uninsured, (2) Hispanics and non Hispanic Blacks have lower median Length Of Stay (LOS), and (3) Hispanics and non Hispanic Blacks are more likely to relapse and make use of multiple drugs than non Hispanic Whites.

METHODOLOGY

Study Population: The study was performed in a 215-bed, nonprofit, standalone hospital in Texas that was the primary teaching hospital for a local medical school. This medical facility contracted services with a national detoxification program (New Vision©) who provided inpatient emergency medical detoxification services for adults with alcohol and drug related problems. All individuals, eighteen years or older (n = 1342) receiving medical detoxification services from October 2000 to September 2003 were identified using the detoxification program database.

Study Variables: We considered age; gender; race/ethnicity; financial classification; alcohol, cocaine, opioid, and multiple drug use status; drug abuse relapse; and hospital length of

stay. Age was categorized into four groups: 18–34, 35–49, 50–64, and 65 and older. Race/ethnicity was self-determined and recorded as non Hispanic Whites, non Hispanic Blacks, Hispanic, and Others. Others category included individuals of Asian, Native American, or Unknown ethnicity/race. We categorized subjects into six different financial classifications according to their method of payment for medical detoxification services: Private, Medicare, Medicaid, Self-pay, Uninsured, and Other. *Private health insurance* included insurance provided by an employer or obtained by direct payment from a private health insurance company. *Self-pay* included individuals making full payment for services, and *uninsured* were defined as individuals not covered by any private or public programs or above-mentioned sources (Wu, Kouzis, and Schlenger 2003). We classified *Others* as payments from workers' compensation, state, and federal funded agencies.

Individuals were classified as multidrug users according to their self-report of drug abuse— whether they used a single substance or more than one substance at the moment of intervention. *Relapse* was defined as seeking and receiving detoxification services on more than one occasion during the three-year period under study. We recorded length of stay as the total number of days an individual stayed at the hospital during treatment. This study protocol sought and received appropriate approvals related to the protection of human subjects from the Institutional Review Board of the University of North Texas Health Science Center.

Data analysis: All hypothesis tests were two-tailed, and statistical significance was assessed at the 0.05 level. We used Pearson chi-square test (Bivariate analysis) across categories to examine the association between race/ethnicity and other variables. Odds Ratios (ORs) were estimated to determine measurements of risk. Data that deviated significantly from normality were analyzed using non parametric methods (Mann-Whitney U test or Kruskal Wallis H test).

Due to small sample size, Self-pay and Other financial classifications were described but later excluded from further analyses. All statistical analyses used SPSS 11.0.

RESULTS

Sample description: The analysis included 1342 individuals seeking medical detoxification services. The sample contained 41.3% women. The mean age was 43.78 (± 12.24) years (data not shown). More than half (54.5%) of the subjects were between the ages of 35 and 49. In fact, 54.7% and 84.6% of the Medicare and Medicaid populations were younger than 50 years old, respectively.

Of those seeking medical detoxification services at this program, 7.1% were Hispanics and 20% were non Hispanic Blacks. About 23.5% had access to private healthcare insurance, and 12.4% were uninsured (Table 1). Alcohol was the primary drug of choice (50.7%), followed by opiod (37.8%), and cocaine (30.4%). About 29% reported abusing more than one substance at the time of intervention (Table 2). The median length of stay at the hospital was 3.0 days. Almost 12% of individuals seeking detoxification services relapsed one or more times during the period under study. About 20% of Hispanics and almost 15% of non Hispanic Blacks relapsed during the three-year period (Table 2).

Bivariate analysis: We conducted Pearson Chi square tests for independence to evaluate association between race/ethnicity and other variables. These analyses revealed that gender was not significantly associated to race/ethnicity. However, age (categorized); financial classification; cocaine, alcohol, and multi-drug use; and relapse were all associated to race/ethnicity ($p < .01$; Tables 1–2).

The non parametric Kruskal-Wallis analysis of variance test revealed a significant difference in length of stay across race/ethnic groups ($p < .05$). Further pair wise comparisons based on nonparametric Mann-Whitney U tests showed Hispanics, but not non Hispanic Blacks, had shorter lengths of stay at the hospital during interventions compared with non Hispanic Whites ($p < .01$, and $p > .05$, respectively; Figure 1). Further analyses by financial classification revealed that only Hispanics on Medicaid had shorter lengths of stay compared with White counterparts ($p < .05$). However, uninsured Hispanics did not show shorter LOS than insured Hispanics, regardless of type of insurance, except for those with Medicaid.

Analysis of association (ORs) showed that non Hispanic Blacks were nearly 80 percent less likely to have private health insurance than non Hispanic Whites ($p < .01$). In addition, non Hispanic Blacks were almost 1.7 and 1.9 times more likely to have Medicare and Medicaid as their primary health insurance than non Hispanic Whites ($p < .01$), respectively. Hispanics were less likely to have Medicare as primary insurance, but more likely to have Medicaid than non Hispanic Whites. However, the ORs were not statistically significant (Table 3). In addition, there was a trend that Hispanics were more likely to be uninsured than non Hispanic Whites. Nevertheless, non Hispanic Blacks were about fifty percent less likely to be uninsured than non Hispanic Whites ($p < .01$; Table 3).

Association analysis between drug of choice and race/ethnicity showed that Hispanics and non Hispanic Blacks were 2.6 and 5.7 times more likely to use cocaine than non Hispanic Whites ($p < .01$; Table 4). There was no difference in opiod use by race/ethnicity ($p > .05$). Non Hispanic Whites were 1.38 and 2.2 times more likely to abuse Alcohol compared with Hispanics

and non Hispanic Blacks ($p < .05$ and $p < .01$, respectively; Table 4). Non Hispanic Blacks and Others were more prone to be multidrug users than non Hispanic Whites ($p < .01$). Hispanics did not differ from non Hispanic Whites in multidrug use. Financial class was statistically significant associated with multi drug within Medicaid and Medicare patients ($p < .01$), but not within the uninsured, (33.4%, 31.4%, and 18.1%, respectively; Table 4).

The odds of relapse among Hispanics were almost two times higher than that of their non Hispanic White counterparts ($p < .01$). Further analyses by financial classification revealed that the odds of relapse for Hispanics were higher regardless of financial classification when compared with non Hispanic Whites. Uninsured Hispanics were the most likely to relapse when compared with other financial classification, although results were not statistically significant. Non Hispanic Blacks were also more likely to relapse but the ORs were only marginally significant ($p = 0.055$). Relapse was higher among those on Medicare (14.8%), followed by Medicaid (13.0%), the uninsured (9.6%), and those on private insurance (8.9%).

DISCUSSION AND CONCLUSIONS

Non Hispanic Blacks were more likely to be insured compared with non Hispanic Whites, mostly by public insurance, but this did not hold for Hispanics, who were about three times more likely to be uninsured compared with non Hispanic Blacks. Traditionally, the Hispanic population has been the minority group with the highest proportion of individuals without insurance. Multiple factors such as illegal immigration status, low-education attainment and low income, and temporary employment without health benefits might interact to produce such a phenomenon. These factors have been considered as primary level barriers in Carrillo's model (Carrillo et al. 2001).

In addition, we observed lower median LOS in the Medicaid category within Hispanics. Aggressive case management or sociocultural barriers (Carrillo's third level) such as culture and language barriers or discriminatory practices, both intentional and unintentional (Smedley, Stith, and Nelson 2002) could explain these results. Nevertheless, uninsured Hispanics did not show lower LOS. A measure of disease severity or detailed symptoms related to the condition at time of admission could have provided a better understanding of such findings. However, such measures were not available on this database.

Hispanics were not only more likely to be uninsured and to have lower LOS, but also to relapse. These findings could, in fact, indicate that uninsured Hispanics, as well as Hispanics on Medicaid, are being discharged earlier from the acute detoxification center, which is the primary access to the healthcare system for most uninsured and Medicaid individuals with substance abuse problems. This, in turn, interrupts the normal course of care and hinders timely access to further treatment, such as rehabilitation. In fact, the waiting period for the only public rehabilitation facility in the county was approximately twenty-one days (Tarrant County Challenge, Inc. 2004). Therefore, it is not a surprise that this weakening of safety nets might give way to higher relapse among these vulnerable populations.

Several limitations of the current study should be considered before conclusions are drawn. Two of the major concerns were about potential information bias due to self-reporting of drug abuse by patients and failure to include substance abuse severity or other medical conditions among patients that might have confounded our findings. In addition, other demographic and socioeconomic variables were not available because this database was independent from the clinical and billing systems of the hospital. Finally, further in-depth analysis for confounding and interactions between such variables is warranted.

A number of studies have demonstrated that substance abuse treatment has a pronounced positive impact on reducing illegal drug use, criminal activity, and victimization. In addition, reduction in hospital visits, inpatient mental health visits, homelessness, exchange of sex for money or drugs, HIV-related risk behaviors, welfare dependency, relapse and criminal activity among inmates who receive treatment in prison, and unemployment have been linked to substance abuse rehabilitation (Amaro 1999; Hubbard et al. 1997; SAMHSA 1998). However, policy makers remain unconvinced, and are reluctant to consider this a public health matter.

Substance abuse is a major public health problem. It affects the health of a vast number of Americans and results in remarkable costs to the healthcare system in the United States as well as to society in general. The public health community must provide strong leadership in informing policy, advocating for needed research funds, and bringing practice in line with scientific advances in substance abuse prevention and treatment. Publicly funded treatment could pave the way. An effective strategy might consist in making significant improvements in the coverage and quality of substance abuse treatment under Medicaid and the Substance Abuse Treatment Block Grant Program, which currently requires insufficient accountability for the use of treatment dollars. Increased public coverage would reach the poorest populations, among whom the most chronic and complex drug users are most prevalent. At the same time, it is critical to improve the delivery of substance abuse treatments funded by Medicaid and the block grants through the adoption of protocols and models based on proven methods. This would enable providers to staff programs with an appropriately trained workforce, match the length of treatment to the level of client impairment, and provide more comprehensive and culturally competent services that are needed by individuals addicted to drugs and alcohol.

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