B. Arab Americans in Publicly Financed Substance Abuse Treatment

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Objectives. To determine the characteristics of Arab Americans receiving treatment and to compare them with individuals of other ethnic groups.

Methods. We used admission data (FY2005) for Michigan publicly funded substance abuse treatment (*N*=69,989). Arab American ethnicity (*n*=224 or 0.3% of admissions) was defined by codes for race, ethnicities or primary language of Arabic (*n*=21). Other ethnicities examined were American Indian, Hispanic, African American, and White.

Results. The number of Arab American admissions was lower than expected for the population (RR=0.25). Admissions were concentrated (81%) in metropolitan Detroit as is the community (82%, RR=.99), unlike other ethnicities. Primary drugs of abuse were alcohol (34.8%), marijuana (17.9%), heroin (17.4%) and crack cocaine (15.6%). Mean duration of use (11.2 yrs) was significantly lower than for other ethnicities. Arab American admissions were predominately male (76.3%), unemployed (62.1%) and with criminal justice involvement (58%), similar to other ethnicities.

Discussion. Using administrative database has its limits and may misclassify ethnicities. Based upon the available data, it appears that Arab Americans accounted for a small percentage of admissions to publicly funded substance abuse treatment in Michigan. Most of the admissions listed English as the primary language, raising concern that language may be a barrier to entry. Admission profiles were generally similar across ethnicities, except that Arab Americans were entering treatment after shorter duration of use. These data can inform development of treatment programs and outreach efforts. (*Ethn Dis*. 2007;17[Suppl 3]:S3-72–S3-76)

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Introduction

The Arab American community in the United States encompasses several waves of immigration from 22 countries of origin with diverse socioeconomic status, different religions and, importantly, reasons for migration. In general, however, they have a shared geographic, historical and cultural identity. These cultural beliefs include importance of family and honor.[1,2] Another commonality is, especially recently, heightened exposure to stigmatization and discrimination.[3] Drug and alcohol use is forbidden specifically by strict Muslims who consider misuse to bring shame to the family. According to the 2000 census, Arab Americans are concentrated in 10 states throughout the United States, with Michigan having the largest concentration of any state.[4] Within Michigan, the Arab American population can be found in 82 of 83 counties but is concentrated in the three counties of metropolitan Detroit.

Although research on immigrants has found them less likely to have many chronic diseases (healthy immigrant effect) due to selection of those most fit to migrate, this effect does not extend to the mental health arena.[5] For mental health in general and substance abuse specifically, the reason for migration (eg, refugees) and traumatic experiences overwhelm any healthy immigrant effect. In addition, stress of migration and adjustment to new communities, potential dissolution of protective factors such as employment, intact family structure or religious beliefs and discrimination may heighten the risk of substance abuse or other disorders.[6–8] Lafferty and colleagues present findings from community forums with Arab Americans immigrants who discuss alcohol abuse as a consequence of stress.[1]

Barriers, such as language or denial of problem, however, may impede substance abuse treatment entry for Arab Americans. Knowing the number of admissions by Arab Americans is a starting point for examining barriers. Providers also need this information in order to respond to the need for culturally appropriate treatment. In addition, treatment indicators complement health needs assessment from other sources to provide health status information about a community.[1] Knowing the descriptive epidemiology of Arab Americans admitted to publicly financed substance abuse treatment provides data to help shape outreach efforts and treatment.

The purpose of this study is to determine the descriptive epidemiology of Arab Americans admitted to publicly financed substance abuse treatment.

Methods

We used the existing administrative database on all admissions in the state of Michigan for publicly financed substance abuse treatment for fiscal year 2005 (*N*=69,989). Admission data are routinely collected and required by the state of Michigan on all publicly financed substance abuse treatment. Publicly financed treatment is defined as treatment services paid by Medicaid or from the federal substance abuse prevention and treatment block grant. It does not include self-pay or payments from commercial insurers, criminal justice entities, other state or local funds, or federal programs specific for veterans. The data, after examination for completeness, consistency and obvious errors, are then transmitted to the federal government as part of the reporting requirement.

Table 1. Ethnic-specific admission and population size in Michigan

I. Statewide admissions				
	Admissions *N*	Admissions % within total	% 2000 population	Relative Risk
Arab American	224	0.3	1.2	0.25
American Indian	978	1.4	0.6	2.33
Hispanic	2,510	3.6	3.3	1.09
African American	18,230	26.0	14.2	1.83
Non-Hispanic White	46,774	66.8	78.6	0.85
Missing/refused/Asian/ more than one race	1,273	1.9		
Total	69,989	100%		

II. Within ethnicities, percentage in metropolitan Detroit			
	Admissions % within ethnicity	% 2000 population	Relative Risk
Arab American	80.8	82.0	0.99
American Indian	10.6	24.0	0.44
Hispanic	23.9	36.0	0.66
African American	61.2	72.0	0.85
Non-Hispanic White	30.8	35.0	0.88

NB: Asian /Pacific Islander population in Michigan is estimated to be .3%, according to the 2000 census. In fiscal year 2005 admission data for publicly funded substance abuse treatment, .3% of admissions (N=180) were coded as Asian/Pacific Islander.

As required by the state of Michigan, intake assessors located in specific locations around the state collect data using appropriate state-approved forms. The assessors collect the information as part of an intake process to assess eligibility for treatment, eligibility for public funding, level of care required (eg, outpatient, non-hospital residential) and need for specialized services (eg, mental health). The initial assessments may be in person or over the telephone, depending on local requirements.

The intake form covers demographic information such as date of birth, sex, race, ethnicity (ie, Puerto Rican, Mexican, Cuban, other Hispanic, Arab-Chaldean), primary language spoken (469 pre-specified categories), county and living arrangement. It also covers primary drug of abuse (determined through frequency of use and consequences) and age at first use of that drug. Duration of use can then be determined by subtracting current age from age at first use. To assist with placement, data are collected on prior treatment for substance abuse, mental issues, and criminal justice involvement. Due to increasing interface with drug courts,[9] the assessors also must indicate if the admission resulted from a drug court referral.

Ethnicity for this analysis was determined using a combination of race categories, ethnic categories and primary language spoken. The dominant primary language was English (98.9) or not determined (0.2%). Admissions listing race category of ''Arab American'' or ethnicity of ''Arab Chaldean'' or primary language of Arabic were considered Arab American. Only 21 admissions had Arabic listed as the primary language. Admissions with race category of ''Hispanic'' or ethnicity of ''Puerto Rico'', ''Mexican'', ''Cuban'' or ''other Hispanic'' or primary language of Spanish listed were considered Hispanic. Only 443 admissions had Spanish listed as the primary language. Admissions with the race category of African American, American Indian or White listed were considered African American, American Indian or White, respectively. Excluded from the ethnic categories but included in total admission group were Asians/Pacific Islanders (0.3%), refused to answer (0.0%), unknown (0.8%) and ''multiracial'' (0.9%). Because an individual admission could be coded in different ethnic groups, the following hierarchy was used: admissions were coded first as Arab American and if not Arab American then as Hispanic, African American, American Indian and finally White.

Analysis used admission as the unit of analysis. Multiple admissions within a given fiscal year occur but typically constitute a small percentage of total admissions. Admission, as opposed to individuals, has the advantage of better estimating the challenges to the system and individual providers. Descriptive statistics were used to summarize the data. When comparing the proportion of admissions to the population by ethnicities, relative risk (RR) was calculated. Due to the very large sample size and objective of describing the data, analytical statistics were used only to examine differences in age at admission and duration of use by ethnicities. For these analyses, univariate analysis of variance models were constructed with post hoc testing by Tukey's honestly

Table 2. Primary drug of abuse by ethnicities

	Arab American	American Indian	Hispanic	African American	Non-Hispanic White	Total
Alcohol	34.8	59.9	50.8	28.4	48.3	43.2
Marijuana	17.9	13.8	19.6	18.4	16.0	16.9
Heroin	17.4	3.0	9.2	20.8	11.6	13.7
Crack	15.6	5.8	9.2	26.4	9.3	13.7
Other opiates	8.0	10.6	3.3	1.1	7.0	5.4
Powder cocaine	4.0	3.7	5.2	4.1	4.0	4.0
Benzodiazepines	1.8	0.5	0.2	0	0.4	0.3
Other drugs	0.4	2.7	2.5	0.8	3.5	2.7
Total*	100%	100%	100%	100%	100%	100%

* May not total 100% due to rounding error.

significant difference. All analysis was conducted using SPSS 14.0 (Chicago, Ill).

As the investigators had no part of data collection or access to identifying information that could be linked to individuals, the analysis was not considered human research. It was therefore not reviewed by the Wayne State University Institutional Review Board.

RESULTS

Arab American admissions constituted a small percentage of the total admissions (0.3%) which was lower than their proportion of the population as measured in the 2000 census (1.2%) for a RR=0.25. The White group was the only other ethnicity to have a RR of less than unity (RR=0.85). Table 1 shows the distribution of admissions and population by ethnicities.

As the Michigan Arab American population is concentrated in metropolitan Detroit (82%), the ethnic concentrations of admission within these three counties were calculated using the 2000 census. Across ethnicities, the RRs were less than unity, indicating smaller proportion of admissions within ethnicities in metropolitan Detroit than their proportion of the population. The RR for Arab Americans came closest to unity (RR=0.99).

The distribution of primary drug of abuse by ethnicities is displayed in the Table 2. In rank order, Arab American admissions listed alcohol, marijuana, heroin, crack, other opiates (ie, prescription painkillers), powder cocaine and benzodiazepines. The other ethnicities had admissions for other drugs, such as prescription stimulants, as primary drug of abuse, but there were no admissions for these drugs by Arab Americans.

Across ethnicities, admissions were primarily for first treatment by males who were unemployed (Table 3). A low proportion of admissions were by homeless individuals with the highest rate in African Americans (17.2%). Mental health issues (20.1%) and drug court involvement (5.8%) were listed on a minority of Arab American admissions. Criminal justice involvement (eg, probation, parole), however, was prominent and included 58% of the Arab American admissions.

Age at admission and duration of use differed significantly by ethnicity (Table 3). From the post hoc test, the mean age of African-American admissions (mean=38.9) was significantly older than that of other ethnicities. The mean duration of using the primary drug of abuse was different and shorter for Arab American (mean=11.2) compared to each of the other ethnicities. The Hispanic and White admissions

Table 3. Admission characteristics by ethnicities

	Arab American	American Indian	Hispanic	African American	Non-Hispanic White	Total
Male, %	76.3	58.7	72.1	64.8	64.5	64.8
Age, mean*	31.3	32.5	31.3	38.9	32.5	34.1
Unemployed, %	62.1	60.4	50.4	66.6	54.9	57.8
Homeless, %	5.8	6.7	5.7	17.2	7.1	9.6
Mental health issues, %	20.1	35.0	24.9	16.7	32.7	28.2
Criminal justice involvement, %	58.0	62.8	65.3	39.3	60.6	55.2
Drug court involvement, %	5.8	2.1	5.1	2.9	4.4	4.0
First treatment, %	71.0	66.8	70.1	67.6	65.9	66.5
Duration of use in years, mean**	11.2	16.2	13.8	19.0	14.6	15.7

* Significantly different across ethnicities. Using Tukey's HSD, African American admissions had higher mean age than admissions for other ethnicities.

** Significantly different across ethnicities. Using Tukey's HSD, mean duration of use was lower for Arab American admissions, followed by Hispanic and non-Hispanic White admissions, followed by American Indian admissions, and then African American admissions.

had the next longer mean duration of use, followed by American Indian and then African American. In stratified analysis, criminal justice involvement had no differential impact on duration by ethnicities (ie, criminal justice involvement was consistently associated with shorter duration of use across ethnicities). However, there was no ethnic difference in duration of use for admissions with residents outside of metropolitan Detroit; the mean duration was 13.2 for Arab Americans versus 14.7 for all other admissions.

DISCUSSION

Admissions by Arab Americans constituted a small, in absolute number and relative to the population size, percentage of publicly funded substance abuse treatment in Michigan. In addition, their admissions were clustered in the same three counties where the majority of the community lives. Interestingly, the concentration of admissions in Metropolitan Detroit appeared greater than that observed for other ethnicities. This consistency with geographic distribution of the community may be a result of improved outreach locally, more skewed concentration of economically disadvantaged Arab Americans or presence of services in the Metropolitan Detroit area. The concentration of services is supported by the finding that 9 of the 11 Michigan substance abuse treatment facilities offering treatment in Arabic are located in metropolitan Detroit.[10]

The small number of admissions, especially outside of metropolitan Detroit, may be a result of barriers, such as language, to entering treatment. Only 21 admissions listed Arabic as the primary language. The relative lack of admissions with Arabic as the primary language may mean greater outreach efforts are needed. For the providers, they may not be seeing substantial language burden, as almost all (99.1%) of the admissions did not list a non-English primary language.

A contributing factor to the few observed admissions by Arab Americans is the inherent limitation of using an administrative database. Intake assessors are not research personnel with extensive training and quality control supervision for validly and reliability coding ethnicity. Some assessors may ask for self-reported ethnicity while others may rely upon observations. Individuals accepted for admission have limited motivation for asserting their ethnicity and checking the validity of coded responses. If substance abuse is highly stigmatized by an ethnic group, the individual may purposively deny that ethnicity. The database is also limited to those who were admitted to publicly funded treatment. No information is available on individuals who received treatment with other payment sources.

An additional limitation is the use of the 2000 census, which is known to have undercounted minorities and does not reflect recent population changes. Between 1990 and 2000, the Arab American population, as counted by the census, increased 65%. Between 2000 and 2005 additional changes are likely. Finally, the results are limited to one state where Arab Americans have the largest concentration and may not generalize to the rest of the country.

Cognizant of these limitations, one can still ask why the Arab American admissions were such a small percentage of overall admissions. Is it due to under-identification, language and other barriers, denial of need, seeking other care, or a lower burden of substance use disorders due to cultural factors or healthy immigrant effect?[11] These results raise questions but do not answer them.

Interestingly, the profile of Arab American admissions was quite similar to that of other ethnicities. The admissions were dominated by unemployed men with criminal justice involvement. The recognition of need for mental health treatment was also low. This may be due to the state's new system, which is just beginning the process of integrating mental health and substance abuse treatment. The presence of post-traumatic stress disorder (PTSD), known to be present in recent Iraqi[12] and Lebanese[13] refugees, would probably not be assessed and therefore under-counted.

The primary drugs of abuse reported in the Arab American admissions are drugs associated with high societal costs.[14] They appear to reflect drugs that are available in metropolitan areas, as opposed to country of origin preferences.[15] Unusual drugs, which would necessitate new treatment plans, were not mentioned in the Arab American admissions.

The Arab American admissions, although similar in many ways, differed from other ethnicities on duration of use. Arab Americans are being admitted for treatment sooner after initiating use of the primary drug when compared to other ethnicities. These data do not elucidate the mechanism but suggest it is related to residing in a metropolitan area where better support services are available. More research, however, is needed on assessing the reasons so that it can be maintained, improved and disseminated to other ethnicities.

In conclusion, this short descriptive epidemiology of admission to publicly funded substance abuse treatment by Arab Americans has a number of limitations. The results, however, combined with information on prevalence of substance use disorder and primary drug of abuse within the community could be used to assist development of appropriate treatment programs and outreach efforts. The results raise important questions for future, more-focused research. It also provides a baseline to track changes over

time as outreach and the community changes.

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