THE LOUIS DE LA PARTE FLORIDA MENTAL HEALTH INSTITUTE

Provider Effects on Racial/ Ethnic Disparity in the Florida Medicaid Population

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Provider Effects on Racial/Ethnic Disparity in the Florida Medicaid Population

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Provider Effects on Racial/Ethnic Disparity in the Florida Medicaid Population

Executive Summary

Reducing health disparities is a key goal set by Healthy People 2010 (U.S. Department of Health and Human Services, 2000). Barriers to service provision include travel distance to a provider, racial and ethnic dissimilarities between service providers and recipients, and living in rural as opposed to urban environments. Each of these barriers to care should independently influence consumer satisfaction with Medicaid services, and combined, should paint a more detailed picture than previously possible. This study was designed to evaluate the relative contributions of these three barriers to care on satisfaction with Medicaid health and mental health services.

Method

Self-report data were collected from adult recipients of Medicaid benefits using a five-step mail survey approach. Multistage stratification was used to select Medicaid recipients from the Medicaid eligibility file who later received a survey on the quality of Medicaid services. Medicaid institutional and outpatient service records were linked to respondents' survey data and combined with distance and driving times to their service providers as generated by ARC-GIS, a geographical information system. Participant's home addresses were categorized as either urban or rural using the Rural Urban Commuting Codes (RUCA version 2.0) developed by University of Washington.

Statistical analyses explored differences in access to mental and physical health services received by Medicaid recipients of differing racial and ethnic backgrounds, and how access impacted by transportation issues and rurality affected satisfaction with services received.

Conclusions and Implications

The results of this study indicate that disparities in access to health care by Medicaid recipients vary among minority ethnic and racial groups, and that the differences cannot be explained in terms of physical barriers to care, such as distance or driving time. The present investigation sought to determine the impact of three independent factors on satisfaction with Medicaid services: 1.) Distance and driving time to provider 2.) Influence of care recipient living in urban vs. rural areas and 3.) Racial, gender, and ethnic similarity of provider to care recipient (concordance).

General Findings

Hispanics receiving health and mental health services in the current study were more satisfied with those services than non-Hispanics; however they were more dissatisfied with the quality of the dental and alcohol/substance abuse services (which were generally rated poorly). It is important for policymakers to focus

on how these services can be improved as the satisfaction with the dental and alcohol/substance abuse services was low among all groups studied.

Blacks and persons of races other than White used more institutional physical health services. Female respondents also used more institutional services than male respondents. Male respondents used more institutional mental health services than females. Neither race nor ethnicity played a significant role in outpatient service use, however.

Distance and Driving Time to Provider

It was hypothesized that driving distance and driving time to a provider would be negatively related to number of services received by Medicaid recipients and by extension to their satisfaction with those services. This hypothesis was not borne out by the data. Driving distances and times were unrelated to satisfaction with Medicaid services for any group. While excessive travel times to get to a mental health provider was cited more frequently as a reason for not receiving those services by Hispanic respondents, mileage and driving time calculations generated by an independent objective methodology (ARC-GIS) contradicted this assertion. Hispanic respondents had the same transit times and distances for outpatient and inpatient mental health services and physical health services as non-Hispanics. Hispanics had no differential service use as a function of driving distance and time to either their mental health or physical health providers.

Influence of Urban/Rural Residency

While driving distance and time had little impact on service utilization in this largely urban sample, we found that residing in a rural area in Florida differentially affected access to care. For all individuals not receiving Medicaid services during the study interval, those living in rural areas were approximately twice as likely to have unmet health service needs. Individuals not receiving services were more likely younger, male and Hispanic than those receiving services.

Provider/Care Recipient Concordance

Neither racial, ethnic, nor gender concordance of care recipient and provider had an impact on satisfaction with any of the Medicaid services received. It is noteworthy that two items "I feel that my healthcare provider understands my background and values" and "My provider was sensitive to my cultural/ethnic background" were more strongly endorsed by participants who were concordant with their provider for ethnicity. Likewise racially discordant participants more strongly endorsed two items: "I doubt that my health care provider really cares about me as a person" and "I feel my health care provider does not do everything he/she should do for my health needs". Both findings suggest that satisfaction with Medicaid services is a multi-determined phenomenon and that racial and ethnic concordance may play an indirect but still significant role in satisfaction with services.

Limitations of the Study

It is possible that the choice of AHCA area 11 as a study site may have limited the inclusion of more rural areas, thus resulting in shorter driving distances and resulting in a truncation of range problem for mileage and driving time estimates. Having more rural regions included for comparison in the study would result in a better understanding of the unique problems affecting rural access to care. An extension of the current study into more rural regions of Florida could provide that information.

The present sample was drawn from Medicaid records that indicated 33% of survey respondents were Hispanic, but when asked by the survey to volunteer their ethnicity, 54% of all respondents described themselves as Hispanic, and in many cases considered themselves as being White. A serious issue arises as to whether ethnicity and race are independent constructs or should be combined within the same item, as is the case in Medicaid's classification algorithm. None would seriously ask if a person was White or female, yet the mixing of race and ethnicity within a single item poses precisely this difficulty for researchers seeking to understand the influence of these two independent factors. Clearly treating race and ethnicity as independent constructs within Medicaid's data systems would assist investigators trying to disentangle the factors influencing satisfaction with Medicaid service delivery and should be undertaken by the program's administrators.

Background

Access to quality care—"the timely use of personal health services to achieve the best health outcomes" (Millman, 1993), is essential for eliminating health disparities and increasing the quality and years of healthy life for minorities (Mayberry, Mili & Ofili, 2000). Institute of Medicine's (IOM) report 'Unequal Treatment' (Smedley, Stith, & Nelson, 2003) asserted that factors impeding access to health care are "the most significant barriers to equitable care" and "must be addressed as an important first step toward eliminating healthcare disparities". It is well established nationally that racial and ethnic minorities experience more barriers to care, lower quality of care, and consequently more health problems and higher mortality than non-minorities (Agency for Healthcare Research and Quality (AHRQ), 2006; Smedley, Stith & Nelson, 2003; Mayberry, Mili & Ofili, 2000). They are also less likely to use mental health services and facing the similar access barriers as in seeking physical health services (Snowden, 1999; Matsuoka, Breaux, & Ryujin, 1997; Padgett, Patrick, Burns et al., 1994).

The commonly documented factors impeding access to health care include a lack of financial resources, a cultural preference that discourages health-seeking behavior, low health literacy levels, language barriers, and a mistrust of the health care system due to a prior negative experience. In addition to these factors at the individual level, several barriers are also addressed at the system level, such as poor health insurance coverage, poor availability of providers, lack of access to a regular source of care, and legal or bureaucratic barriers to receiving public aid (Goldberg, Hayes, & Huntley, 2004). Among these barriers, the lack of insurance coverage

and financial resources are the most definitive barriers in explaining the disparities in access to care. But providing insurance coverage and financial resources alone is clearly not sufficient for ensuring access to needed health services for individuals, especially for disadvantaged minorities (Scheffler & Miller, 1989; Snowden & Thomas, 2000). Padgett and colleagues (1994) reported that provision of insurance benefits with more generous mental health coverage does not increase treatment seeking as much among African Americans and Hispanics as among non-Hispanic Whites (Padgett et al., 1994). Although Medicaid is a great resource that eliminates many financial barriers for the uninsured (Andrulis, 1998), racial and ethnic disparities in service received and quality of care continue to be prevalent. In comparing the difference in Medicaid pharmacy use between Black and White dually eligible Medicare beneficiaries, Schore and colleagues (2003) found that Black beneficiaries have significantly fewer prescriptions filled. Similar findings are also observed in the Florida Medicaid population (Chen, Chen, & Mehra, 2005).

The insufficiency of reducing financial barriers as the sole strategy for eliminating racial and ethnic disparities points to the important role of non-financial barriers in explaining the disparities and calls for culturally, linguistically, and geographically more appropriate services provision. Language barriers, for example, pose a problem for minorities who are non-English proficient and where health systems lack the resources to provide interpretation and translation services. Minorities are more likely to report poor communication with their physical and mental health providers, less likely to use preventive care services, and more likely to rely on the emergency room for care (AHRQ, 2006). It is reported that nearly 14 million Americans are not proficient in English, and as many as one in five Spanish-speaking Latinos reports not seeking medical care due to language barriers (Robert Wood Johnson Foundation, 2001). Similarly, cultural differences about the value of medical care and attitudes toward seeking treatment create potential barriers to health care access as a result of poor communication with their providers (Bodenheimer& Grumbach, 2005).

Provider/Patient Concordance

To provide services in a culturally and linguistically sensitive manner requires addressing the barriers at the care process level and the provider's side in interaction with patient and system level factors. Many factors related to provider beliefs and behaviors, provider quality, provider location, and provider-patient interaction are identified as barriers impeding minorities' access to health care (Collins, Hughes, Doty, Ives, Edwards & Tenney, 2002; Bach, Pham, Schrag, Tate, & Hargraves, 2004). Bach and Colleagues (2004) found fewer physicians were providing services to Blacks compared to Whites and were less qualified. Physicians who provided services to Black patients had more difficulties accessing high-quality subspecialty clinical resources, diagnostic imaging services, and non-emergency admission to hospitals.

One of the hottest debates regarding access issues at provider level in the last two decades has been whether increasing the number of racial/ethnic minority health professionals would reduce physical and mental health disparities for

ethnic minorities. This debate has largely been informed by a significant body of studies on the role of patient/provider concordance with regard to race, ethnicity, and language (Cooper and Powe, 2004). Many studies have documented that minority physicians tend to provide a disproportionately large share of health care to patients from their own racial and ethnic backgrounds (Saha & Shipman, 2006). African American and Hispanic patients, if given a choice, tend to seek care from physicians of their own race/ethnicity (Saha, Taggart, Komaromy & Bindman, 2000). It was reported in the same study that 25% of African Americans and 23 % of Hispanics saw either an African American or Hispanic physician, even though African American and Hispanic physicians represented just 4% and 5%, respectively, of physicians nationwide. In another study, Saha and colleagues (1999) found that both Black patients with Black physicians and Hispanic patients with Hispanic physicians were associated with a lower likelihood of having unmet health needs and a greater likelihood of self-reported satisfaction with the services. Patients in race-concordant relationships were also found significantly more participatory than patients in race-discordant relationships (Cooper-Patrick, L., Gallo, J.J., Gonzales et al., 1999). As most of the provider-patient concordance studies focus on the effect of concordance or discordance on patients' ratings of care, Cooper and colleagues (2003) conducted one of the very few studies to delve into the underlying mechanisms of the effect. They concluded that racial/ethnic concordance is associated with higher patient ratings of care independent of patient-centered communication and other factors such as patient and physician attitudes may mediate the relationship.

Provider/patient concordance is also associated with increased use of mental health services. Studies have suggested that matching clients from a minority group with clinicians from the same racial/ethnic background increases the use of community mental health services and reduces the use of emergency services and inpatient interventions. (Snowden, Hu, & Jerrell, 1995; Ziguras, Klimidis, Lewis, & Stuart, 2003). Whaley (2001) found that African Americans with severe mental illness are more comfortable with African-American racial/ethnic matched clinicians although this may not be possible in the area where they reside, especially for disadvantaged populations such as Medicaid recipients. Given that Black physicians and Hispanic physicians work in communities with five times the proportion of Black residents and twice the proportion of Hispanic residents respectively when compared to other physicians (American Medical Student Association (AMSA), 2004), and both are more likely than White physicians to treat Medicaid and uninsured patients (National Conference of State Legislature (NCSL), 2000), the significant underrepresentation of minority physicians (AMSA, 2004) greatly restricts the access to care for minority patients.

Distance and Driving Time

Travel burden is a key element in conceptualizing geographic accessibility of providers and is another important potential barrier to access to health care especially for vulnerable populations, such as rural residents and racial and ethnic minorities (Guagliardo, 2004). The use of travel time and distance to measure travel burden has become commonplace in studies of variations in access to health

care services and in studies evaluating the effect of geographical accessibility on the use of services (Guagliardo, 2004; Lovett, Haynes, Sunnenberg & Gale, 2002). These studies have suggested that health care utilization is adversely affected by long travel distance and times. Indeed, patients may forgo free care if it is greater than 20 miles away (Brustrom and Hunter, 2001). Several state health departments have proposed a standard in which rural residents should not have to travel more than 30 minutes to see a physician (Bosanac, Parkinson & Hall, 1976). In two studies, it was found that travel distance affected the probability of utilization of mental health and alcoholic treatment services (Fortney, Rost, Zhang & Warren, 1999; Fortney, Booth, Blow & Bunn, 1995). Another two studies reported that increasing travel distance was associated with decreased utilization of breast cancer treatment (Athas, Adams-Cameron et al., 2000; Nattinger, Kneusel, Hoffmann.& Gilligan, 2001).

The majority of geographic accessibility studies have been primarily conducted in rural and mixed urban/rural areas. This rural focus is fueled by the recognition that distance is an obvious impediment in sparsely populated areas, and by the alarming decline of the healthcare workforce supply in rural America (Probst, Laditka, Wang & Johnson, 2007). Rural residents are more dependent on friends and family for transportation and limiting their trip timing, route, flexibility, and preferred mode of travel. This dependence has been shown to be associated with reduced number of physician visits for chronic care (Arcury, Preisser, Gesler & Powers, 2005). In Florida, the relatively close geographic proximity of rural counties to urban reduces the problem of physical isolation found in many western states. Almost all Florida residents are within one-hour travel time of an acute care hospital and health services located in an urban area (Florida's Office of Rural Health, 2002). Although travel burden is less a problem in mostly urban Florida, concern about geographic accessibility to healthcare providers in urban areas should remain high (Smedley, Stith & Nelson, 2003), and the effect of travel burden on accessibility of providers needs to be tested for vulnerable minorities and the Medicaid population.

Travel burden is likely to compound access problems experienced by minorities. In both urban and rural areas, minorities are more likely to use public transportation for all non-work related trips (Polzin, Chu & Rey, 1999). African Americans report longer travel distances for non-work related trips than Whites, and Hispanics report longer non-work related travel time than other ethnic groups (Polzin, Chu & Rey, 1999). Minorities are likely to use less health care corresponding to their longer travel distance or time.

Rural/Urban Residence

Travel burden is mostly studied in the context of rural residence and is only one of the many excessive barriers experienced by rural residents. Rural/urban residence in itself is an important factor affecting access to care for the general population and minorities. Compared with urban residents, rural residents tend to be older, poorer, and in worse health (Ziller, Coburn et al., 2003; Stearns, Slifkin & Edin, 2000; Braden & Beauregard, 1994). They are more likely to lack health insurance (Mills & Bhandari, 2003; Vistnes & Zuvekas, 1999; Hartley,

Quam & Lurie, 1994; Frenzen, 1993), are less likely to receive recommended preventive services and report, on average, fewer visits to health care providers (Ziller, Coburn et al., 2003; Casey, Call & Klingner, 2000, Agency for Health Care Policy and Research, 1996). Although 20% of Americans live in rural areas, only 9% of physicians in America practice in those settings (AHRQ, 2006). Rural residents are reported to bear the added burden of persistent shortages of providers, high rates of rural hospital closures, lack of quality care, transportation difficulties and long distance to obtain care (Larson & Fleishman, 2003; van Dis, 2002; Casey, Call & Klingner, 2000).

Consistent with the above national findings, the rural communities in Florida suffer similar obstacles. According to the Florida Rural Health Plan (Florida's Office of Rural Health, 2002), lack of financial resources, poverty, and scarcity of providers are persistent problems for Florida residents in rural areas. The reliance on market forces as the primary means to distribute health care professionals continues to produce widespread shortages of health care providers in rural areas. Sixty-four of the 67 counties in the state have an area or a population designated as a Health Professional Shortage Area and 65 counties have designated Medically Underserved Areas or Populations. Health care providers in Florida's rural areas report a continual struggle to maintain financial solvency. They continue to face major challenges in establishing and maintaining services and recruiting and retaining trained personnel.

Less is known about whether racial and ethnical minorities in rural settings may be at additional risk for inadequate health care due to significant barriers. It is observed that among rural populations, African Americans, Hispanics, and Native Americans are three times as likely to be poor as are non-Hispanic Whites (US Department of Agriculture, 1996). It is possible that the general poorer access to health care services experienced by minority populations is exacerbated by a variety of factors, such as poverty, transportation problems, and limited provider availability in the rural health care delivery environment (Slifkin, Goldsmith & Ricketts, 2000). Slifkin and colleagues (2000) confirmed that, in addition to the known national disparities between Whites and other racial/ethnic groups, rural minorities are even further disadvantaged in services use and outcomes than their urban counterparts in the six health areas in the President's initiatives.

Purpose and Specific Aims

This study examined the Medicaid provider distribution in AHCA area 11, which serves as a proxy for service availability for the Medicaid population, and to explore racial and ethnic disparities in Medicaid health services. Specifically, the study was conducted to answer the following questions:

1. What are the racial and ethnic backgrounds of Medicaid providers in Area 11?
2. What are the racial and ethnic backgrounds of Medicaid beneficiaries in Area 11?
3. Do driving distances to providers vary between different racial and ethnic groups? What are the mean driving distances to provider for each ethnic and racial beneficiary group studied?

4. Do urban and rural Medicaid beneficiaries living in Area 11 have different driving distances to their providers?
5. Does beneficiary satisfaction with Medicaid services of different racial and ethnic groups differ due to the individual or combined effects of driving distance, urban vs. rural residence location, or racial and ethnic concordance of beneficiary and provider?

Methods

Subjects

Both Medicaid claims data and eligibility data were used to identify potential subjects. A multi-stage stratified sampling procedure was used to sample the potential participants from Medicaid recipients in residing in Area 11. (See Chen, 2007 for additional details on the subject selection protocol). Individuals older than 17 years of age and having a diagnosis of diabetes and/or having a psychiatric diagnosis were identified from Medicaid claims data spanning July 1, 2004 to December 31, 2005 as potential candidates for the study. Eligible subjects met a 3 (race/ethnicity) x 2 (gender) selection criteria and were:

1. Aged greater than 17;
2. Living in AHCA area 11, Miami-Dade and Monroe Counties;
3. Had a race/ethnicity of either White, Black or Hispanic;
4. Eligible for Medicaid benefits between July 1st 2004 and December 31, 2005;
5. Enrolled in a fee-for-service plan;
6. Not eligible for Medicare;
7. Diagnosed with mental illness and/or a medical condition of diabetes.

This yielded a pool of 1,419 male and 1,421 female adults selected at random based on their race/ethnicities and gender. Self-report data were collected using the five-step mail survey procedure recommended by Dillman (1978) and Salant and Dillman (1994).

Instruments

The mail survey questionnaire entitled "Survey on the Quality of Florida's Medicaid Medical Services" included measures assessing a number of key issues in health disparities. Based on the 1st year literature review and focus group responses, the questionnaires included items sampling physical/mental health functioning levels (SF-12; Keller, Kosinski, & Ware, 1996) psychiatric symptoms (Colorado Symptom Index; Shern, Wilson, & Coen, 1994) and satisfaction with services received related to cultural and linguistic competent services and demographic information.

ARC-GIS version 9.2 was used to determine the geographical coordinates of the participant's domicile and that of their service provider and to render accurate driving distances and times between these locations. ARC-GIS is a sophisticated geographical information system whose algorithms underpin major commercial

products such as MapQuest and Maps.com. A major goal of the present investigation was to evaluate the role driving distance and time to providers in rural and urban settings plays on minority satisfaction levels with Medicaid services.

The Rural/Urban status for each participant was determined by matching the domicile zip code against a table of the Rural Urban Commuting Codes (RUCA version 2.0) developed by University of Washington and available at http://depts.washington.edu/uwruca/.

Data Collection

After University of South Florida Internal Review Board approval, a five-step mailing procedure recommended by Dillman (1978) and Salant and Dillman (1994) was used for data collection. The first mailing consisted of a pre-notification postcard informing the Medicaid recipients who were sampled that we were conducting a study examining their health care services and that they would receive a questionnaire in the mail in about a week. One week later a second mailing was conducted including a personalized cover letter and questionnaire in English and Spanish explaining the purpose of the study and that respondents would receive $8.00 for returning the completed questionnaire. Information about the days and hours of operation of the toll-free telephone number was included as well as a preaddressed stamped return envelope. One week later, a postcard reminder was sent to each person who had not responded. This reminder emphasized the importance of the study and included a toll-free telephone number they could call for information. Two weeks thereafter a postcard reminder was mailed and a fourth mailing sent to each non-respondent containing a cover letter, questionnaire, and return envelope. Finally, a fifth mailing was sent via certified mail to individuals who, four weeks later, had still not responded. As with the first and fourth mailing, recipients received a personalized cover letter, questionnaire, and a preaddressed, stamped return envelope.

Analytical Approach

A total of 25 subjects' data out of the original 719 were excluded from the analysis because their domicile address could either not be verified using ARC-GIS version 9.2 or because it was a post office box. Each of the remaining 694 subjects' Medicaid institutional claims and outpatient claims occurring between 4/1/2005 to 3/31/2006 was merged with their survey responses. The street address of each Medicaid service provider was validated against ARC-GIS version 9.2. Two providers of institutional services whose addresses were located outside Florida were excluded because their inclusion would have yielded excessive driving distances and times that would clearly be outliers in the distributions; this deletion reduced the total set of institutional service records by four. Using the ARC-GIS network analysis program "StreetMap USA," a total of 2,871 routes (one per service record) were generated between respondents' home address and their institutional service providers' location. Likewise, a total of 1,206 routes were generated between respondents' home addresses and their outpatient service provider. StreetMap USA generates the shortest driving distances and times for each path for each service instance. Driving time (in minutes) and distance (in

miles) to each survey respondent's providers was cumulated to produce total driving time and total driving distance to each type of provider (mental or physical health). Totals reflected the number of trips to each provider multiplied by the measured distance and time to that provider and summed across all providers a participant visited during the course of the study. The Rural/Urban status for each participant was determined by matching the domicile zip code against a table of the Rural Urban Commuting Codes (RUCA version 2.0) developed by University of Washington and available at http://depts.washington.edu/uwruca/. The type of service rendered (physical health vs. mental health service) was differentiated using the Medicaid ICD-9 codes for each service record according to the following table for institutional service delivery. ICD-9 codes falling outside the range of those appearing in Table 1 were considered as indicating Medicaid physical health service use.

Table 1

Distribution of Mental Health Diagnoses for Institutional Services Received (out of 2,871)

Mental Health Service ICD-9 Code	Frequency	Percent	Cumulative Percent
292.9 Drug Mental Disorder Nos.	1	.7	.7
293.82 Psych Disord Halluc Cond Class Elew	1	.7	1.5
295.30 Paranoid Scizo Unspec	4	3.0	4.4
295.31 Paranoid Schizo Subchr	1	.7	5.2
295.32 Paranoid Schizo-Chronic	29	21.5	26.7
295.34 Paran Schizo-Chr/Exacerb	15	11.1	37.8
295.70 Schizoaffective-Unspec	7	5.2	43.0
295.72 Schizoaffective-Chronic	1	.7	43.7
295.74 Schizoaffect-Chr/Exacer	13	9.6	53.3
295.90 Schizophrenia Nos-Unspec	3	2.2	55.6
296.20 Depress Psychosis-Unspec	3	2.2	57.8
296.23 Depress Psychosis-Severe	1	.7	58.5
296.24 Depr Psychos-Sevf w/ Psych	3	2.2	60.7
296.30 Recur Depr Psychos-Unsp	6	4.4	65.2
296.33 Recur Depr Psych-Severe	3	2.2	67.4
296.34 Rec Depr Psych-Psychotic	16	11.9	79.3
296.44 Bipol I, Manic-Severe w/ Psych	1	.7	80.0
296.53 Bipol I, Depr-Severe Bipol	1	.7	80.7
296.63 Bipol I, Mixed-Severe	1	.7	81.5
296.64 Bipol I, Mixed-Sev w/ Psych	2	1.5	83.0
296.80 Manic-Depressive Nos	1	.7	83.7
296.82 Atypical Depressive Dis	1	.7	84.4
298.0 React Depress Psychosis	1	.7	85.2
298.9 Psychosis Nos	8	5.9	91.1
300.00 Anxiety State Nos	3	2.2	93.3
300.02 Generalized Anxiety Dis	1	.7	94.1
300.9 Nonpsychotic Mental Disorder Nos	1	.7	94.8
309.9 Adjustment Reaction Nos	1	.7	95.6

Mental Health Service ICD-9 Code	Frequency	Percent	Cumulative Percent
311 Depressive Disorder Nec	1	.7	96.3
312.34 Intermitt Explosive Dis	1	.7	97.0
780.09 Other Consciousness Alteration	4	3.0	100.0
Total	135	100.0	

For survey respondents, 142 out of the 1,206 (11.8%) outpatient service instances during the study interval were for mental health care. The balance (88.2%) of outpatient service instances were for physical health services.

Analyses presented in the following section will include simple descriptive statistics and analysis of variance to compare group differences in service use and satisfaction.

Results/Discussion

A total of 719 individuals returned the survey and yielded a 25.3% unadjusted return rate. Their genders were 50.9% (366) male with a mean age of 51 years old (SD=9.93), and their racial/ethic composition was 31.2% (224) non-Hispanic White, 33.1% (238) non-Hispanic Black, and 35.7% (257) Hispanics according to the Medicaid eligibility records. Table 2 provides detailed demographic information on the participants. There was no difference in gender or diagnosis among the three racial/ethnic groups. However, White adult Medicaid participants are significantly older than Black participants (53 vs. 50 years old, respectively). Black participants had significantly higher physical functioning level while Hispanic participants had a significantly lower mental health functioning level and more psychopathic symptoms than those of White participants. Subsequent analyses are based on the 694 individuals who provided verifiable street address information.

Table 2
Characteristics of Study Participants

			Non-Hispanic White	Non-Hispanic Black	Hispanic	Total
Measure		N	224	238	257	719
Gender	Female	N	110	120	123	353
		%	49.11	50.42	47.86	49.10
	Male	N	114	118	134	366
		%	50.89	49.58	52.14	50.90
*Age	Mean		52.55	49.59	50.88	50.98
	Std. Dev		8.49	9.60	11.09	9.90
	Minimum		27.21	18.32	19.45	18.32
	Maximum		64.72	64.52	64.55	64.72

			Non-Hispanic White	Non-Hispanic Black	Hispanic	Total
Diagnoses	Mental Illness Only	N	68	78	82	228
		%	30.36	32.77	31.91	31.71
	Co-morbid	N	76	75	87	238
		%	33.93	31.65	33.72	32.96
	Diabetes Only	N	80	84	90	254
		%	35.71	35.29	35.02	35.33
*Physical Health Functioning (SF-12)		N	216	231	248	695
	Mean		32.52	35.51	34.32	34.15
	Std. Dev		9.40	9.76	9.24	9.53
	Minimum		17.19	18.13	18.32	17.19
	Maximum		58.46	65.63	63.58	65.63
*Mental Health Functioning (SF-12)		N	216	231	248	695
	Mean		34.73	36.12	33.60	34.79
	Std. Dev		9.57	9.58	10.26	9.87
	Minimum		13.87	16.96	15.20	13.87
	Maximum		60.79	63.80	63.64	63.80
*CSI score		N	217	225	248	690
	Mean		35.48	34.84	39.00	36.54
	Std. Dev		12.58	14.06	13.47	13.51
	Minimum		14	14	14	14
	Maximum		70	70	70	70

* Differences among three race-ethnic groups are statistically significant, $p < .05$

Demographic Analysis

Of the 694 respondents, 379 (54.6%) declared themselves to be Hispanic—76.3% of these characterized themselves as White on the survey's independent measures of ethnicity and race. The study participants declared ethnicity and race measures are used to define the study groups for the remainder of this study because these measures are independent and the Medicaid measure of race/ethnicity was not used because it combined race with ethnicity.

All but two Hispanics lived in urban areas and the mean age for Hispanics was 51.6 years (SD 10.32; median 55 years) with 50.7% of Hispanics being male. For Hispanic and non-Hispanic Whites (n=370), 95.4% lived in urban areas and their mean age was 51.4 years (SD 9.65, median 53 years) and 52.6% were male. For Blacks or persons of races other than White (n=314), just 28.4% described themselves as Hispanic, and 49.5% were male. The mean age for non-White respondents was 49.3 years (SD 10.13, median 50.5 years).

A decision was made to evaluate access to institutional care and outpatient care separately. Institutional care centers were observed in this dataset to be less numerous than outpatient care facilities and located in more central metropolitan areas, while outpatient care facilities were found to be widely geographically distributed. It was thought that driving distances to these two types of providers

would differ significantly and so separate analyses are presented for Medicaid services rendered at institutional locations and services rendered on an outpatient basis. The analysis of institutional service use is presented first.

Institutional Service Use

Driving distance and time to receive institutional services did not vary by self-reported ethnicity or race (see Tables 3 and 4) nor did these measures vary by gender. Neither did number of institutional services received vary with driving distance or time to receive those services. Driving times and distances were observed to be highly variable, and this is reflected in the standard deviation for these measures; with some participants having traveled great distances to receive services in other parts of the state while others lived under a mile from their provider. The lack of an observed relationship of race and ethnicity to driving distance may be due in part to the presence of metropolitan mass transit for the majority of our respondents (the reader will recall that all but two Hispanics domiciled in urban areas). Reduced access to transportation more adversely affects access to care in rural areas than in urbanized areas where transportation is more readily available. However, a survey item stating access to transportation as a reason for differences in accessing mental health services was not differentially endorsed by any racial, ethnic or gender subgroup of respondents. Interestingly, Hispanics were more likely than non-Hispanics to endorse an item claiming they had trouble accessing mental health services because their travel times were excessive (χ^2=4.38 df=1, p<.05), although overall only a small number of participants (4.9%) endorsed this item and driving distances and times for Hispanics presented in Table 3 do not corroborate the assertion that their travel times were excessive.

Table 3
Driving Distance and Time to Receive Institutional Care by Ethnicity

Participant Ethnicity		Physical Health Appointments Total Driving Time (Minutes)	Physical Health Appointments Total Driving Distance (Miles)	Mental Health Appointments Total Driving Time (Minutes)	Mental Health Appointments Total Driving Distance (Miles)
Non-Hispanic	Mean	121.38	113.24	36.10	31.60
	N	215	215	29	29
	Std. Dev.	536.90	575.09	45.02	40.89
Hispanic	Mean	58.39	51.72	61.43	60.77
	N	231	231	27	27
	Std. Dev.	123.29	124.91	204.22	218.42
Total	Mean	88.76	81.37	48.32	45.67
	N	446	446	56	56
	Std. Dev.	384.02	409.95	144.60	153.69

Note: no groups significantly differed at p<.05

Table 4
Driving Distance and Time to Receive Institutional Care by Race

Participant Race		Physical Health Appointments Total Driving Time (Minutes)	Physical Health Appointments Total Driving Distance (Miles)	Mental Health Appointments Total Driving Time (Minutes)	Mental Health Appointments Total Driving Distance (Miles)
White	Mean	65.24	57.52	60.38	59.35
	N	231	231	26	26
	Std. Dev.	134.23	134.35	208.16	222.78
Black or other	Mean	112.89	105.82	35.17	31.25
	N	215	215	29	29
	Std. Dev.	534.73	573.32	44.82	40.73
Total	Mean	88.21	80.80	47.08	44.53
	N	446	446	55	55
	Std. Dev.	383.91	409.85	145.82	155.04

Note: no groups significantly differed at p<.05

Impact of Rural Vs. Urban Residence on Access to Institutional Care

468 of 694 respondents received institutional services during the study interval. Of the 226 participants who received no institutional services during the study interval, 6.9%, resided in rural areas, compared to only 1.7% of the 468 who did receive services but also lived in rural areas; this difference was statistically significant (χ^2=11.55, df=1, p<.001). Those living in rural areas were twice as likely as expected to receive no service during the study interval. The 226 receiving no institutional services were slightly but not significantly younger (mean=48.9 years SD 10.6) than their counterparts who received institutional services (51.1 years SD =9.5). Additional demographics for the two subgroups are presented in Table 5. A higher percentage of those not receiving services were Hispanic (χ^2=4.3, df=1, p<.-5). No other findings were found for the urban/rural distinction due to the small numbers of survey respondents living in rural settings.

Table 5
Demographics of Those Receiving vs. Not Receiving Institutional Services

	Received services (n=468)	Did Not Receive services (n=226)
Lives in Rural Areas	1.7% (n=8)	6.9% (n=15)
Are Hispanics	52.5%	61.2%
Are Male	49.0%	56.2%
Are White	52.2%	58.3%

Bolded values differ at p<.05

Institutional Services Use by Race, Gender, and Ethnicity

The number of institutional physical health services (MS=392.99; df =1, 684; F=13.811; p<.01) and mental health services (MS 2.58, df=1, 684; F=3.63; p<.05) received was less for Hispanics (see Table 6). Females used significantly more institutional physical health services (MS=232.519, df =1, 692, F=8.19, p<.01) while males were more likely to use institutional mental health services (MS=3.615, df=1, 692, F=4.98, p<.05) (see Table 7). Blacks and non-White respondents used more institutional physical health services than White respondents (MS 189.12, df =1,682; F=6.63, p<.01) but did not differ from White respondents in their use of mental health services (MS 1.99, df=1, 682; F=2.87, p=n.s.).

Table 6
Number of Institutional Services vs. Ethnicity

Participant Ethnicity		Number of mental health services used	Number of physical health services used
Non-Hispanic	Mean	**.25**	**4.39**
	N	307	307
	Std. Dev.	1.086	5.846
Hispanic	Mean	**.12**	**2.87**
	N	379	379
	Std. Dev.	.580	4.881
Total	Mean	.18	3.55
	N	686	686
	Std. Dev.	.847	5.384

Values in bold differ at p<.01

Table 7
Number of Institutional Services vs. Gender

Participant Gender		Number of mental health services used	Number of physical health services used
Male	Mean	**.25**	**2.97**
	N	355	355
	Std. Dev.	1.067	4.872
Female	Mean	**.11**	**4.13**
	N	339	339
	Std. Dev.	.541	5.769
Total	Mean	.18	3.54
	N	694	694
	Std. Dev.	.854	5.357

Values in bold differ at p<.05

Table 8

Number of Institutional Services vs. Race

Participant Race		Number of mental health services used	Number of physical health services used
White	Mean	.12	**3.06**
	N	370	370
	Std. Dev.	.566	4.994
Black or other race	Mean	.23	**4.11**
	N	314	314
	Std. Dev.	1.064	5.720
Total	Mean	.17	3.54
	N	684	684
	Std. Dev.	.833	5.362

Values in **bold** differ at p<.05

Outpatient Service Use

Driving Distance & Time to Access Outpatient Services

Driving distance and time to receive outpatient services did not vary by ethnicity or race (see Tables 9 and 10), nor did they vary systematically by gender. Neither did the number of outpatient services used vary with driving distance or time to receive those services, mirroring the results for institutional service use.

Table 9

Driving Distance and Time to Receive Outpatient Care by Ethnicity

Participant Ethnicity		Physical Health Appointments Total Driving Time (Minutes)	Physical Health Appointments Total Driving Distance (Miles)	Mental Health Appointments Total Driving Time (Minutes)	Mental Health Appointments Total Driving Distance (Miles)
Non-Hispanic	Mean	57.70	50.64	35.13	29.35
	N	153	153	40	40
	Std. Dev.	95.23	86.59	82.45	68.59
Hispanic	Mean	61.33	54.03	17.61	14.95
	N	212	212	55	55
	Std. Dev.	120.84	108.65	25.72	22.47
Total	Mean	59.81	52.61	24.99	21.01
	N	365	365	95	95
	Std. Dev.	110.70	99.88	57.24	47.89

Note: no groups significantly differ at p<.05

Table 10
Driving Distance and Time to Receive Outpatient Care by Race

Participant Race		Physical Health Appointments Total Driving Time (Minutes)	Physical Health Appointments Total Driving Distance (Miles)	Mental Health Appointments Total Driving Time (Minutes)	Mental Health Appointments Total Driving Distance (Miles)
White	Mean	69.55	61.08	20.06	16.34
	N	197	197	52	52
	Std. Dev.	136.45	124.18	55.38	45.69
Black or other	Mean	53.15	47.60	27.78	23.70
	N	166	166	43	43
	Std. Dev.	84.94	79.84	55.23	46.33
Total	Mean	62.05	54.91	23.55	19.67
	N	363	363	95	95
	Std. Dev.	115.91	106.30	55.15	45.88

Note: no groups significantly differ at $p<.05$

Impact of Rural Vs. Urban Residence on Access to Outpatient Services

Like those receiving no institutional services, a greater percentage (4.9%) of the 284 not receiving outpatient services resided in rural areas. Just nine (2.2%) of the 410 who received outpatient services lived in rural areas ($\chi^2=3.91$, df=1, $p<.05$).

In contrast to the findings for institutional service use, no relationship was found between ethnicity and race and outpatient service use. Outpatient service users were more likely to be female (53.4%) while those not receiving outpatient services were more likely to be male (57.7%; $\chi^2=8.36$, df 1, $p<.001$). No differences in age were found between those receiving outpatient services and those who did not.

Outpatient Service Use by Race, Gender and Ethnicity

Unlike the institutional service analysis, no reliable differences in the number of mental health or physical health services used were found for the declared ethnicity or race survey measures. Females, however, made significantly greater use of outpatient services as was previously found for institutional services (MS=105.63, df=1, 692, F=17.94; $p<.001$). The results appear in Tables 11 – 13 below.

Table 11
Number of Outpatient Services vs. Ethnicity

Participant Ethnicity		Number of mental health services used	Number of physical health services used
Non-Hispanic	Mean	.19	1.37
	N	306	306
	Std. Dev.	.592	2.360
Hispanic	Mean	.18	1.58
	N	380	380
	Std. Dev.	.546	2.542
Total	Mean	.19	1.49
	N	686	686
	Std. Dev.	.567	2.463

Note: no groups significantly differ at p<.05

Table 12
Number of Outpatient Services vs. Gender

Participant Gender		Number of mental health services used	Number of physical health services used
Male	Mean	.21	**1.10**
	N	355	355
	Std. Dev.	.669	1.858
Female	Mean	.19	**1.88**
	N	339	339
	Std. Dev.	.569	2.905
Total	Mean	.20	1.48
	N	694	694
	Std. Dev.	.622	2.456

Values in **bold** differ at p<.05

Table 13
Number of Outpatient Services vs. Race

Participant Race		Number of mental health services used	Number of physical health services used
White	Mean	.19	1.63
	N	370	370
	Std. Dev.	.62	2.68
Black or other	Mean	.19	1.32
	N	314	314
	Std. Dev.	.59	2.17
Total	Mean	.19	1.49
	N	684	684
	Std. Dev.	.60	2.46

Note: no groups significantly differ at p<.05

Overall Service Delivery and Satisfaction Measures

Overall, 565 individuals out of 694 received either an institutional or outpatient service during the study period. The mean number of mental health services was .47 (SD=1.3) while the average number of physical care services was 6.2 (SD=6.59) and 97.9% of all care recipients lived in urban areas. Those receiving services averaged 50.7 years old (SD=9.7), were 49.3% male, 55% Hispanic, and 54% White. In contrast the 129 who received no services of any kind were more likely male (60.2%) and more likely to live in rural areas (8.5%). Their mean age was similar at 49.2 years (SD=10.8) and they were just as likely to be Hispanic (56.6%), and White (54.3%).

Hispanics had higher satisfaction with Medicaid medical (MS=15.66, df 1, 535, F=19.87, p<.01) and mental health services (MS=12.11, df 1, 370, F=7.54, p<.01) but were less satisfied with dental health services (MS=16.56, df= 1,375, F=11.24, p<.01) and alcohol and drug treatment services (MS=12.40, df= 1,242, F=14.04, p<.01). These results are presented in Table 14.

Table 14

Participant Satisfaction Level with Services Received By Ethnicity

Ethnicity		Medical Services satisfaction	Dental Services satisfaction	Eye or Vision Services satisfaction	Mental Health Services satisfaction	Alcohol/ Drug Use Services satisfaction
Non-Hispanic	Mean	**3.18**	**2.15**	2.59	**2.57**	**1.66**
	N	239	174	191	158	122
	Std. Dev.	1.015	1.245	1.265	1.233	1.088
Hispanic	Mean	**3.52**	**1.73**	2.66	**2.93**	**1.21**
	N	298	203	242	214	122
	Std. Dev.	.771	1.186	1.292	1.291	.763
Total	Mean	3.37	1.92	2.63	2.78	1.44
	N	537	377	433	372	244
	Std. Dev.	.903	1.230	1.279	1.278	.965

Values in **bold** differ at p<.01

In contrast, Blacks and persons of races other than White had low satisfaction with medical (MS=3.81, df 1, 534, F=4.69, p<.05) and mental health services (MS=10.28, df 1, 370, F=6.44, p<.05), but were more satisfied than Whites with Medicaid dental services (MS=14.25, df 1, 372, F=9.66, p<.01). Overall the level of satisfaction for dental health services and alcohol and drug treatment services was low. These findings are presented in Table 15.

Table 15
Participant Satisfaction Level with Services Received By Race

Race		Medical Services satisfaction	Dental Services satisfaction	Eye or Vision Services satisfaction	Mental Health Services satisfaction	Alcohol/ Drug Use Services satisfaction
White	Mean	**3.45**	**1.73**	2.69	**2.95**	1.37
	N	291	193	231	202	115
	Std. Dev.	.863	1.178	1.301	1.266	.940
Black or other	Mean	**3.28**	**2.12**	2.55	**2.61**	1.51
	N	245	181	202	170	128
	Std. Dev.	.943	1.253	1.258	1.260	.988
Total	Mean	3.37	1.91	2.63	2.79	1.44
	N	536	374	433	372	243
	Std. Dev.	.904	1.229	1.281	1.273	.966

Values in **bold** differ at p<.05

No gender differences were found in satisfaction for any service received.

Concordance Analysis: Impact on Satisfaction Measures

It has been argued that the similarity of the provider to the care recipient impacts their satisfaction with the services received. In order to evaluate this hypothesis we examined three concordance measures (ethnicity, race, and gender) for their effect on satisfaction with medical, vision, dental, mental health or substance abuse services received. The determination of provider race was made onerous by the confusing of the concepts of race and ethnicity in the original survey item. The distribution of participant responses to the item appears in Table 16.

Table 16
Provider's Race/Ethnicity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	White	200	28.8	30.8	30.8
	Black or African American	49	7.1	7.6	38.4
	Hispanic or Latino	338	48.7	52.1	90.4
	Asian	12	1.7	1.8	92.3
	Native Hawaiian or other Pacific Islander	3	.4	.5	92.8
	American Indian or Alaskan Native	2	.3	.3	93.1
	Others	45	6.5	6.9	100.0
	Total	649	93.5	100.0	
Missing	Blank/Missing	44	6.3		
	Not Applicable	1	.1		
	Total	45	6.5		
Total		694	100.0		

Using the information from Table 16, it was possible to distinguish the race of 311 respondents not listed in the table as Hispanics. Because of the low numbers of individuals in the Black, Asian, Native Hawaiian or other Pacific Islander, American Indian or Alaskan Native and Other categories, these providers' race data were combined and dichotomized as White vs. Black/other race. Therefore 200 Whites and 111 Black/other race provider's data were linked to the participants' racial data and used for the race concordance measure.

The results for the satisfaction measures based on racial concordance of participant and provider are presented in Table 17 below. As may be seen in the table, the racial concordance of the participant and their provider had no significant bearing on the satisfaction with any of the physical health, mental health or substance abuse services received.

Table 17
Satisfaction with Health Services by Racial Concordance

Racial concordance of participant and provider		Medical Services satisfaction	Dental Services satisfaction	Eye or Vision Services satisfaction	Mental Health Services satisfaction	Alcohol/ Drug Use Services satisfaction
Discordant race	Mean	3.27	2.03	2.64	2.70	1.45
	N	118	86	92	74	55
	Std. Dev.	.967	1.241	1.245	1.311	.899
Concordant race	Mean	3.37	2.06	2.58	2.88	1.57
	N	122	89	105	88	58
	Std. Dev	.929	1.265	1.314	1.163	1.094
Total	Mean	3.32	2.05	2.61	2.80	1.51
	N	240	175	197	162	113
	Std. Dev	.947	1.249	1.280	1.232	1.001

Note: No values different at $p<.05$

Provider ethnicity was extracted from the item as being Hispanic (n=338) or non-Hispanic (n=311, or the remainder endorsing the item). This measure was then linked to the measure of the participant's declared ethnicity to generate a concordance value of 1 or 0 (concordant or discordant). The measure of concordant or discordant ethnicity was then tested against satisfaction measures for physical health services and mental health services (Table 18). It was determined that the ethnic concordance for provider and care recipient had no significant impact on the satisfaction with either the physical health or mental health services rendered by the provider.

Table 18
Satisfaction with Health Services by Ethnic Concordance

Ethnic concordance of participant and provider		Medical Services satisfaction	Dental Services satisfaction	Eye or Vision Services satisfaction	Mental Health Services satisfaction	Alcohol/ Drug Use Services satisfaction
Discordant ethnicity	Mean	3.32	2.13	2.52	3.45	1.41
	N	106	71	86	51	22
	Std. Dev	.991	1.309	1.326	.856	.959
Concordant ethnicity	Mean	3.39	1.91	2.73	3.36	1.52
	N	286	195	226	112	63
	Std. Dev	.879	1.243	1.266	1.003	1.105
Total	Mean	3.37	1.97	2.67	3.39	1.49
	N	392	266	312	163	85
	Std. Dev	.910	1.262	1.284	.958	1.065

Note: No values different at $p<.05$

Finally, the gender concordance of provider to participant was evaluated for its contribution to measures of satisfaction with health services received and the results are presented below in Table 19.

Table 19
Satisfaction with Health Services by Gender Concordance

Gender concordance of participant and provider		Medical Services satisfaction	Dental Services satisfaction	Eye or Vision Services satisfaction	Mental Health Services satisfaction	Alcohol/ Drug Use Services satisfaction
Discordant gender	Mean	3.43	2.06	2.77	2.88	1.47
	N	221	154	180	147	92
	Std. Dev	.890	1.287	1.232	1.274	.988
Concordant gender	Mean	3.32	1.84	2.59	2.79	1.42
	N	271	190	218	193	127
	Std. Dev	.905	1.185	1.300	1.254	.955
Total	Mean	3.37	1.94	2.67	2.83	1.44
	N	492	344	398	340	219
	Std. Dev	.899	1.235	1.272	1.261	.967

Note: No values different at $p<.05$

It was clear from these analyses that neither racial, ethnic, nor gender concordance directly affected satisfaction with any of the services received by the survey's participants. It is worth noting however, that two items "I feel that my healthcare provider understands my background and values" and "My provider was sensitive to my cultural/ethnic background" were more strongly endorsed by participants who were concordant with their provider for ethnicity (MS=9.17, df=1, 529, F=8.99 $p<.01$ and MS=4.54, df=1, 515, F=4.00, $p<.05$). Likewise racially discordant participants more strongly endorsed two items "I doubt that my health care provider really cares about me as a person" and "I feel my health

care provider does not do everything he/she should do for my health needs" (MS=9.02, df=1, 242, F=3.88, p<.05 and MS=6.86, df=1, 242, F=3.68 p<.05. Both of these findings suggest that satisfaction with Medicaid services is a multi-determined phenomenon and that racial and ethnic concordance may play a small but significant role.

Because of the lack of influence of concordance on satisfaction with services, no justification could be made for more complex regression analyses evaluating the respective contribution of combined concordance measures on satisfaction for any of the service measures. To summarize, the concordance of participant and provider characteristics was not directly responsible for observed satisfaction levels with Medicaid services.

Conclusions

The present investigation was conducted to determine the impact of three independent factors on satisfaction with Medicaid services. It was assumed that driving distance and driving time to a provider would be negatively related to number of services received by Medicaid recipients and their satisfaction with those services. This hypothesis was not borne out by the data. Driving distances and time were unrelated to satisfaction with Medicaid services. The length of time required to get to a mental health provider was endorsed as a reason for not receiving those services significantly more often by Hispanic respondents, however the mileage and time calculations generated by ARC-GIS for this subgroup contradict this assertion, revealing that Hispanic respondents do not have longer transit times either for outpatient or inpatient mental health services or physical health services. Neither do Hispanics show differential service use as a function of driving distance and time to either their mental health or physical health providers. It is possible that the choice of area 11 may have resulted in a truncation of range problem by limiting the inclusion of more rural areas and by doing so selecting shorter driving distances.

While driving distance and time had little impact on service utilization in this largely urban sample, it was clear that residing in a rural area in Florida differentially affected access to care. For all individuals not receiving Medicaid services during the study interval, those living in rural areas were twice as likely to fall in this category. These nonusers tended to be somewhat younger, however, and may have been healthier at the outset.

Ethnicity, as expected, played a major role in access to care and satisfaction with services received. Self identified Hispanics which constituted 54.6% of the sample overall were made up 61.2% of the subgroup who received no Medicaid services. Hispanics were found to use fewer institutional health and institutional mental health services but did not differ from non-Hispanics in their use of outpatient services. Hispanics were more satisfied with the medical and mental health services they received, and less satisfied than non-Hispanics with the dental health and alcohol/substance abuse services provided (both of these services were regarded poorly among all respondents).

Blacks and persons of races other than White used more institutional physical health services, a finding mirrored by all female respondents irrespective of race or ethnicity. Male respondents irrespective of race used more institutional mental health services than did females. Neither race nor ethnicity played a significant role in outpatient service use, however.

The results from the racial/ethnic/gender concordance analysis were unexpected. Neither racial, ethnic nor gender similarity of respondent to provider explained differences in satisfaction in any of the services received. It was expected that similarity of respondent to provider would explain variations in satisfaction and support the contention that matching a Medicaid service recipient to a person of similar background would improve satisfaction with services rendered. This hypothesis received no support, however.

Policy implications

It is rare to find a situation in which obtaining negative results provides much guidance or may benefit service delivery; however the current investigation's outcomes may serve that purpose. The finding that travel time and distance to providers is unrelated to satisfaction with services allows policymakers to focus on the availability of basic transportation, especially in rural areas, for persons requiring Medicaid services. The perception among Hispanic respondents that mental health service delivery is impeded because "it takes too long to get to a service provider" may, in fact, be more a perception not attributable to variations in true driving time or distance, as our data suggests. It is important to determine what factors drive this perception, since it appears to be informed by something other than fact.

Clearly Hispanics receiving health and mental health services in the current study were satisfied with those services, however they were generally dissatisfied with the quality of the dental and alcohol/substance abuse services. It is important for policymakers to focus on how these services can be improved as the satisfaction with these services is low among all groups studied.

Finally, policymakers should understand that satisfaction with Medicaid services is a multi-determined phenomenon and that the concordance of the provider and care recipient may prove relatively less important that other factors operating in Florida's unique service delivery climate. It is noteworthy that the present sample was drawn from Medicaid records that determined that only 33% of respondents were Hispanic, however, when asked in the survey to volunteer their ethnicity over 54% of respondents described themselves as Hispanic. Furthermore, questions arise as to whether ethnicity and race are independent constructs and should be confused within the same category, as is the case with the Medicaid classification algorithm. No one would seriously ask if a person was White or female, yet the confusion of race and ethnicity within a single item poses this difficulty for researchers seeking to understand the influence of these two factors as independent constructs. A clear definition of race and ethnicity as independent constructs within Medicaid's data systems would assist investigators trying to disentangle the factors influencing satisfaction with Medicaid service delivery and should be undertaken by the program's administrators.

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