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Demographic and Practice Characteristics of Psychiatrists who Primarily Treat Patients with Substance Use Disorders

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Abstract

This study examined the sociodemographic and practice characteristics of psychiatrists whose caseloads consist primarily of patients with Substance Use Disorders (SUD). A survey instrument was completed by a random sample of 865 psychiatrists. Study groups were defined as high-SUD providers if psychiatrists reported having 51% or more patients with SUD ($n = 92$) and non-SUD providers as those who reported not having any patients with SUD ($n = 128$). High-SUD providers tended to be younger, more likely to graduate from international medical schools, have larger caseloads, work more hours per week, and have a higher proportion of inpatients and publicly funded patients than non-SUD providers. Results suggest that psychiatrists who primarily treat patients with SUD are in their early careers and treat patients with more clinical, psychosocial, and economic disadvantages. The implications of these findings for psychiatry training programs and policy makers will be discussed.

The proportion of patients with a specific mental disorder treated by psychiatrists may be associated with characteristics of the clinician and the clinical practice. Differences in practice characteristics may be due in part to the intrinsic clinical characteristics of the patient's diagnosis or extrinsic factors that may either predispose the patient to a particular disease or develop as a consequence of the disease. Intrinsic factors may include level of severity and disability produced by the disease. For example, psychiatric practices for severely drug-dependent patients who exhibit significant symptoms of withdrawal, with immediate urgency for drug substitution and risk of becoming violent, may require emergency care services, possibly in residential settings and with an appropriate security system. In contrast, a psychiatric practice of patients with phobic disorders may require a more supportive milieu and a behavioral plan to treat the specific phobia.

Extrinsic predisposing factors may include local epidemiological trends, socio-cultural and economic factors, and type of health insurance coverage. Extrinsic consequences of the disease may include changes in socio-economic status, stigmatization, discrimination, unemployment, loss of health insurance coverage, and involvement in the criminal justice system, among

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others. Epidemiological studies have shown that the prevalence of abuse or dependence on various types of substances is not uniformly distributed across the US. Cocaine, heroin, and other illicit drug use tends to be more prevalent in urban than rural communities,¹ methamphetamine abuse is more common on the West Coast,² and heroin dependence is more prevalent in the Northeast.^{3,4} Similarly, quantity and type of SUD treatment services are not uniformly distributed across the country. Certain areas have more numerous and diverse services, offering residential versus outpatient treatment, methadone maintenance versus drug-free only, SUD separate from mental health treatment or linked through common providers, etc. For example, clinics licensed to dispense methadone tend to be located in urban areas with high prevalence of illicit drug use.⁵ Furthermore, insurance benefits and health care reimbursement for such services vary from state to state and area to area.

Extrinsic factors as a consequence of drug abuse or dependence may also affect treatment practice. For example, substance abuse is an underlying factor in violence, incarceration, poor treatment adherence, and HIV risk.⁶ Patients with alcohol and substance use disorders are more likely to be male, young adults, and receive care in inpatient and public settings than patients without SUD.^{7,8} Treatments for patients with SUD are more likely to be subject to utilization review and medication formularies, and patients with SUD are more likely to have financial considerations resulting in reduced duration of treatment than patients without SUD.⁸

Advocacy organizations have issued position statements calling for increased funding for treatment, awareness of substance abuse and associated stigma, studies of treatment efficacy, and a need for more clinicians to enter training programs in addictions treatment.^{9–12} Nonetheless, there is still a shortage of physicians to treat addictions. The trend will likely continue, since addiction fellowships have had difficulty in recruiting residents to fill their openings.¹³ Despite increases in training for addictions treatment during medical school and residency, the number of physicians who choose addiction psychiatry has been much lower than for other medical specialties, such as cancer or heart disease.¹⁴ This trend may be related to the nature of the clinical practice of treating patients with SUD. It is possible that the high prevalence of substance abuse among psychiatric patients may discourage some medical students from entering psychiatry residency, and only those who are willing to deal with patients with these disorders elect to enter such programs.¹⁵

To examine factors associated with psychiatric practice, the Practice Research Network of the American Psychiatric Association conducted a series of studies examining the practice characteristics of psychiatrists in different clinical specialties. Results showed that psychiatrists treating a high proportion of geriatric patients were more likely to be older, male, work longer hours per week, and work in hospital settings than those treating a lower proportion of geriatric patients.¹⁶ Currently, knowledge about the practice characteristics of psychiatrists who provide care to a high proportion of patients with SUD is limited, although studies have shown that substance abuse is an important clinical issue for psychiatrists to address with their patients. Data from a national sample of psychiatric patients indicate that 42% of patients had a history of substance abuse,¹⁷ 12% of patients had a current diagnosis of alcohol abuse or dependence⁸, and among patients with depression, 18% had a co-morbid SUD.⁷ Data from the 1996 National Survey of Psychiatric Practice (NSPP) showed that on average, 10% of patients on psychiatrists' caseloads had a primary diagnosis of alcohol or substance use disorders.¹⁸ Although a large proportion of psychiatric patients present with alcohol and/or substance use problems, currently little is known about the characteristics of psychiatrists who treat a large proportion of patients with SUD.

Given such patterning, the question posed in our study is how does psychiatric practice fit into the equation? That is, are there differences in practice patterns that are unique to the psychiatrists with high caseloads of substance-abusing patients?

The purpose of this study is to examine differences in practices and treatment patterns among psychiatrists whose caseloads consist primarily of patients with SUD compared to those who do not treat patients with SUD. The results are expected to provide important information about the factors associated with treating a high percentage of patients with SUD. This information will help future practitioners to understand differences between addiction psychiatry practice and psychiatry practices that do not treat SUD, identify possible factors related to low interest in addiction psychiatry, and hopefully find possible strategies to improve the working environment of addiction psychiatrists and increase the number of psychiatrists considering addiction training programs.

METHODS

Data for this study were obtained from the 1998 APA National Survey of Psychiatric Practice. The survey instrument collected information about psychiatrists' clinical practices, professional activities, patient caseloads, and sources of income. Psychiatrists were also asked to provide aggregate patient information, including demographics, principal diagnosis, reimbursement, and financial arrangements. The instrument was mailed to 1,500 randomly selected APA members, and a total of 1,076 psychiatrists (72%) responded to the survey. Of the respondents, 865 were currently practicing and provided information concerning the caseload distribution by psychiatric diagnoses. Psychiatrists received small incentives to compensate for the time needed to complete the survey and were eligible to win gift certificates for books. This study was approved by the Institutional Review Board of the American Psychiatric Association.

SUD patients were defined as having a primary or secondary alcohol or substance use disorder other than nicotine dependence. The study groups were defined by the question: "In your last typical work week, what percent of your patients had a clinically significant substance use problem (eg, illicit drugs, alcohol) regardless of primary diagnosis and excluding nicotine dependence?" Psychiatrists were defined as *high-SUD providers* if they reported having 51% or more patients with SUD in their caseload; *non-SUD providers* were defined as those who reported not having any patients with SUD in their caseload. This distribution was selected in an effort to determine clinically relevant and statistically feasible study groups that reflect psychiatric practice patterns of clinicians on either end of the substance abuse treatment spectrum (ie, those who reported treating no SUD patients and those who treated primarily SUD patients).

High-SUD and non-SUD providers were compared for the following demographic and practice characteristics:

- Psychiatrist's sociodemographic profile, including age, race/ethnicity, gender, geographic region, and training.
- Practice profile, including professional activities, number of patient visits, and work setting.
- Patient caseload profile, including locus of care, age, primary diagnosis, substance use problems, and treatments.
- Health systems/financial issues, including payment source and health plan for patients, psychiatrists' managed care involvement, and income.

Data Analysis

Weighted descriptive statistics and results of bivariate statistical tests for differences across study groups (Taylor chi-square for categorical variables and Wald F tests for continuous variables at .05 significance level) as well as logistic regression analyses are presented.

Sampling weights were calculated using SAS and SUDAAN to adjust for oversampling and non-response and provide nationally generalizable estimates, reflecting the demographic and practice characteristics of APA members who are engaged in clinical practice. A more detailed discussion of how weights were calculated, is discussed elsewhere.¹⁸

RESULTS

The majority (85%) of practicing psychiatrists surveyed in this study reported that they treat patients with SUD. Comparisons were made between 92 psychiatrists who reported that more than half of their caseload consisted of SUD patients and 128 who reported that they did not treat SUD patients.

Demographic Characteristics

Table 1 compares the sociodemographic variables and training credentials of high-SUD and non-SUD providers. Psychiatrists who reported treating a high proportion of SUD patients were significantly younger (mean age 47.7 yrs) than non-SUD providers (mean age 58.5 yrs). The proportion of psychiatrists younger than 40 was three times higher in the high-SUD group than in the non-SUD providers ($p < .001$). Practitioners with a medical degree from an international medical school represented 13.7% of the sampled psychiatrists who did not treat patients with SUD but 28.2% of the high-SUD providers ($p < .05$). Although not statistically significant, there were twice as many high-SUD providers practicing in the Western United States (19.1%) as non-SUD providers (10.4%), and there were fewer high-SUD providers in the Northeast (33.8%) than non-SUD providers (40.2%). No statistically significant differences were observed between the non-SUD and high-SUD providers related to psychiatrist's gender, racial/ethnic group, or whether or not the psychiatrist was board certified in general psychiatry.

Diagnosis and Treatment

As seen in Table 2, mood disorders were the most commonly reported diagnoses for both study groups. However, high-SUD providers saw a significantly smaller proportion of these patients than non-SUD providers. High-SUD providers saw significantly more patients with primary psychotic disorders (24.1% versus 9.0%; $p < .0001$) and fewer patients with a primary anxiety, childhood, or other mental disorders than non-SUD providers. High-SUD providers treated more of their patients with group psychotherapy than did non-SUD providers (5.0% versus 0.8%; $p < .05$). High-SUD providers reported not providing any psychotherapy to 36.4% of their patients, as opposed to 24.6% by non-SUD providers ($p < .05$). In comparison with non-SUD providers, high-SUD providers reported treating fewer of their patients with open-ended/insight oriented psychotherapy (24.6% versus 7.2%; $p < .0001$). Psychoanalysis was provided by none of the high-SUD providers. No significant differences were observed in the proportion of psychiatrists caseloads treated with medications; on average, high-SUD providers treated 79% of their patients with medications, as did 71% of non-SUD providers.

Caseload/Practice Profile

As indicated in Table 3, high-SUD providers had a significantly ($p < .001$) higher mean number of patient visits per week (50.2, 95% CI = 42.4–58.1) than non-SUD providers (29.1, 95% CI = 23.3–34.9). They saw a significantly higher ($p < .001$) mean number of patients in the last week (41.4 versus 26.1). Those psychiatrists who treated SUD patients also spent significantly ($p < .001$) more time in direct patient care and in administrative activities directly related to patient care and worked more total hours per week. High-SUD providers saw a significantly higher proportion of their patients in inpatient settings (43.5%, 95% CI = 34.4–52.7) compared to non-SUD providers (6.5%, 95% CI = 2.7–10.4; $p < .0001$). On average, high-SUD providers spent significantly more hours in public psychiatric hospitals (19.9, 95% CI = 11.6–28.3), public general hospitals (17.6, 95% CI = 9.8–25.5) and correctional facilities (8.4, 95% CI = 3.0–

13.9), than non-SUD providers. Non-SUD providers spent significantly ($p < .001$) more hours in solo and group office settings than high-SUD providers. High-SUD providers treated more patients aged 15–64 (89.4%) than non-SUD providers (70.1%; $p < .0001$) and significantly fewer patients fourteen years of age and under (3.1%, 95% CI = 1.5–4.7 vs 14.4%, 95% CI = 9.0–19.7) and more than 65 years (7.5%, 95% CI = 5.3–9.8) vs 15.6%, 95% CI = 10.5–20.5).

Health Plans/Financial Arrangements

Differences in financial arrangements were assessed from three perspectives: the main source of payment for the patient visit, the patient's type of health plan, and the payment mechanism through which the psychiatrist was reimbursed for patient care (see Table 4). High-SUD providers treated a significantly greater proportion of patients whose main source of payment was Medicaid, Veteran's Administration, other government/public funding, and uncompensated care than did non-SUD providers. High-SUD providers had a significantly lower proportion of patients whose main source of payment was private/commercial insurance (13.4% versus 37.4% for non-SUD providers) or self-pay (8.9% versus 25.6% for non-SUD providers).

High-SUD providers saw significantly fewer patients with private/non-managed care health plans (4.6%) compared to non-SUD providers (25.4%). On average, one-fourth of their patients did not have insurance coverage (25.1% compared to 16.3% for non-SUD providers), and 35.1% are covered by public/non-managed insurance plans compared to 19.6% for non-SUD providers ($p < .01$). An average of 11.4% of patients on high-SUD providers' caseloads belonged to "carve-out" mental health plans, in which mental/behavioral health coverage was provided separately from medical/surgical health coverage, as opposed to 8.3% of non-SUD providers. No statistically significant differences in proportion of patients in a managed care plan were found for high-SUD (21.9%) as compared to non-SUD providers (27.7%). High-SUD providers served on an average of 3.2 managed care panels, compared to non-SUD providers who served on 1.8 ($p < .05$).

Regarding psychiatrists' reimbursement for patient care, high-SUD providers had a higher proportion of income from salary (78.3%), while only 29.0% of non-SUD provider's income was from salary. High-SUD providers had a significantly lower proportion of income from discounted and undiscounted fee-for-service compared to non-SUD providers, whose largest source of income was undiscounted fee-for-service.

DISCUSSION

The results of this study suggest that there are important differences between psychiatrists who have high caseloads of patients with SUD versus those who do not report SUD patients on their caseloads. Group differences were found in sociodemographic characteristics of the psychiatrists, co-morbidity of their patients, and nature of their practices.

Among the sociodemographic differences, psychiatrists with high caseloads of SUD patients were significantly younger and more likely to have graduated from international medical schools. It is possible that those psychiatrists are among a group of professionals struggling to get settled in their profession and start their clinical practices by treating patients with SUD. These results are similar to results of a previous study showing that international medical graduates provide care to a disproportionately higher rate of vulnerable patient populations, eg, geriatric patients, minorities, and public sector patients.¹⁶

There were notable differences in the patterns of co-morbid psychiatric disorders of patients seen by psychiatrists depending on their caseloads of SUD patients. Psychiatrists with high caseloads of SUD patients were more likely to see patients with psychotic disorders in their

practices, whereas psychiatrists with no SUD patients were more likely to see patients with childhood, mood, and personality disorders. These results suggest that psychiatrists with high caseloads of SUD patients may treat more complicated and severely ill patients. In terms of treatment, psychiatrists who see a large number of SUD patients are more likely to provide group psychotherapy (although this type of therapy was provided only to a very small proportion of patients in both groups) or no therapy at all. In contrast, psychiatrists with no SUD patients tend to provide more open-ended insight-oriented therapy and psychoanalysis. Although there were no significant group differences in the use of medications, the group difference in the use of insight-oriented therapies may be due to a practice pattern of not providing this type of therapy to patients with SUD, the high demand of treatment services for SUD patients, the scarce resources available to treat SUD, and/or the high prevalence of serious psychiatric co-morbidity (such as psychotic disorders) that may have little benefit from those types of therapies.

With regards to practice characteristics, there are important differences between the two groups of psychiatrists. The results show that psychiatrists with a high proportion of SUD patients have a greater number of visits and patients in the last week, work more hours per week, see more patients in inpatient settings, tend to work in public general hospitals, public psychiatric hospitals, and correctional facilities, and are more likely to receive patient care income from salary. In contrast, psychiatrists who do not have SUD patients in their caseloads tend to work primarily in outpatient settings, solo or group office practices, and receive patient care income from fee-for-service. Promising new treatments such as use of buprenorphine to treat opiate dependence may expand psychiatrists' capacity to effectively treat patients with SUD in office-based settings. Office settings may offer easier access to SUD treatment than more traditional settings, such as methadone clinics, for patients who are relatively stable but need ongoing treatment—particularly those in rural and suburban areas, where negative public opinion has diminished opportunities for methadone treatment. Implementation of policies and strategies that encourage greater numbers of psychiatrists to expand their practices to treat SUD patients may reduce the burden of large caseloads and long hours associated with the provision of substance abuse treatment.

The health plan coverage and financial arrangements of the practices with primarily SUD patients were very different from those without SUD patients. As expected, psychiatrists with high-SUD caseloads were more likely to see patients under Medicaid, the Veterans Administration, and other government/public health plans. In contrast, non-SUD practices had a higher proportion of patients under private insurance and self-pay financial arrangements. In addition, the type of health plan more frequently used by patients seen in high-SUD practices was public insurance under no managed care, whereas those seen in non-SUD practices were more likely to receive services under private insurance/non-managed care. These results suggest that the public sector plays a dominant role in financing the treatment of SUD and may lead us to think that high-SUD practices are more likely to have patients with greater socio-economic disadvantages and receive treatment under less privileged health plans.

The data used for these analyses have a number of limitations. First, the NSPP data presented here were generated by self-report from psychiatrists. Consequently, their validity depends on the extent to which psychiatrists accurately reported treatment and practice information. Second, the analyses in this study were based on aggregated information. The primary focus of the NSPP study was not on substance use disorders but instead on many aspects of psychiatric practice, including treatment of SUD. On the other hand, the NSPP data were collected from a large, nationally representative sample of APA psychiatrists and provides information about psychiatric practices and patients that may not be captured in clinical trials or other types of research. Furthermore, there is no precedent of a similar study.

In summary, psychiatrists with high caseloads of SUD patients tend to be younger, international medical graduates, treat more complicated patients with socio-economic disadvantages, work in public settings with patients receiving public assistance, and provide fewer insight-oriented therapies. Addiction psychiatrists should be prepared to address the needs of a practice that may pose critical clinical as well as socio-economic challenges. It is possible that the challenges of an SUD practice may discourage physicians from entering addiction psychiatry programs. However, although providing care to SUD patients can be highly demanding, it is critical to promote measures to recruit adequate numbers of physicians into the field of addictions psychiatry who can meet the multiple needs of the increasing number of SUD patients. Policies allowing for reimbursement” for substance abuse treatment at levels comparable to other psychiatric and medical treatments may encourage psychiatrists to increase their awareness of substance abuse treatment and expand their practices to include a greater number of SUD patients.

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TABLE 1
Sociodemographic Characteristics of Psychiatrists by SUD Patient Caseload

	No SUD N=128	95%CI	> 50% SUD N=92	95%CI	P
Gender					0.5630
Male	67.7%	59.0–76.4	69.7%	59.3–80.0	
Female	34.3%	25.6–43.0	30.3%	23.9–44.7	
Race					0.1505
Black	2.7%	1.0–4.3	5.3%	2.5–8.1	
Hispanic	3.3%	1.4–5.1	4.4%	1.8–7.1	
White	84.0%	77.9–90.0	71.9%	62.3–81.5	
Other	10.1%	4.5–15.8	18.4%	9.2–27.6	
Age					0.0005
Less than 40	7.1%	3.4–10.8	23.0%	15.2–30.8	
40 +	92.9%	89.2–96.6	77.0%	69.2–84.8	
Region of Practice					0.4150
Northeast	40.2%	31.0–49.3	33.8%	23.0–44.5	
Midwest	21.5%	13.8–29.2	21.5%	12.3–30.7	
South	27.9%	19.7–36.0	25.7%	16.1–35.3	
West	10.4%	4.8–16.0	19.1%	10.4–27.7	
Education					0.0236
U.S. med grad	86.3%	79.7–93.0	71.8%	61.5–82.1	
International med grad	13.7%	7.0–20.3	28.2%	17.9–38.5	
Certification (General Psychiatry)					0.4994
Not board certified	23.1%	15.4–30.8	19.1%	10.4–27.8	
Board certified	76.9%	69.2–84.6	80.9%	72.2–89.6	

TABLE 2
Diagnosis and Treatment of Patients by SUD Patient Caseload

	No SUD	95%CI	> 50% SUD	95%CI	P
Diagnosis (Mean % Patients)					
Childhood disorders	12.8%	8.3–17.3	5.2%	2.0–8.3	0.0070
Psychotic disorders	9.0%	5.8–12.2	24.1%	19.7–28.6	0.0000
Mood disorders	38.3%	33.4–43.2	27.6%	23.8–31.4	0.0007
Anxiety disorders	17.9%	14.6–21.1	6.9%	3.9–10.0	0.0000
Personality disorders	10.6%	7.3–13.9	6.4%	4.5–8.2	0.0256
Other mental disorders	10.6%	7.3–13.8	4.6%	3.0–6.2	0.0012
Psychotherapy (Mean % Patients)					
Supportive individual	33.2%	27.0–39.5	40.5%	32.9–48.2	0.1456
Time-limited insight-oriented	5.0%	3.2–6.9	4.9%	2.9–6.9	0.9291
Open-ended insight-oriented	24.6%	19.2–30.0	7.2%	3.8–10.6	0.0000
Psychoanalysis	4.7%	1.9–7.4	0.0%	0.0	0.0009
Cognitive-behavioral	2.8%	0.8–4.8	4.3%	1.7–6.9	0.3587
Group therapy	0.8%	0.1–1.5	5.0%	1.3–8.7	0.0296
Family/couples therapy	2.7%	0.5–4.8	1.3%	0.6–1.9	0.2163
No psychotherapy	24.6%	17.9–31.3	36.4%	27.6–45.2	0.0368
Patients Treated with Meds by Psychiatrist (Mean %)	70.7%	64.9–76.6	79.1%	71.9–86.4	0.0779

TABLE 3

Practice
Profile of Psychiatrists by SUD Patient Caseload

	No SUD	95%CI	> 50% SUD	95%CI	P
Mean Number of Visits in Last Week	29.1	23.3–34.9	50.2	42.4–58.1	0.0000
Mean Number of Patients in Last Week	26.1	20.4–31.8	41.4	34.1–48.8	0.0014
Mean Number of Hours					
Direct patient care	20.5	17.8–23.1	30.0	25.9–34.0	0.0001
Administrative activities related to patient care	4.2	3.3–5.0	7.7	6.3–9.1	0.0000
Total hours	39.8	36.2–43.3	53.3	49.3–57.3	0.0000
Treatment Setting (Mean % visits)					
Inpatient	6.5%	2.7–10.4	43.5%	34.4–52.7	0.0000
Outpatient	86.1%	80.4–91.9	45.6%	36.4–54.9	0.0000
Other setting	7.3%	3.0–11.7	10.8%	4.1–17.6	0.2580
Mean % of Hours In Each Location					
Solo office	55.4%	46.9–63.9	14.0%	7.3–20.6	0.0000
Group office	9.5%	4.5–14.6	2.0%	0.1–4.0	0.0067
Public general hospital	0.8%	–0.4–2.0	17.6%	9.8–25.5	0.0000
Private general hospital	2.3%	0.7–3.9	3.0%	0.2–5.8	0.6662
Public psychiatric hospital	4.3%	1.1–7.5	19.9%	11.6–28.3	0.0007
Private psychiatric hospital	1.0%	–0.3–2.2	8.3%	3.1–13.5	0.0066
Public clinic outpatient	8.9%	4.4–13.4	14.9%	8.0–21.8	0.1525
Nursing home	3.6%	0.5–6.7	0.0%	0.0	0.0222
Correctional facility	0.3%	–0.3–0.9	8.4%	3.0–13.9	0.0036
Patient Age(%)					
14 and under	14.4%	9.0–19.7	3.1%	1.5–4.7	0.0000
15–64	70.1%	63.8–76.3	89.4%	86.6–92.2	0.0000
65 and over	15.6%	10.6–20.5	7.5%	5.3–9.8	0.0037

TABLE 4
Health Plans and Financial Arrangements by SUD Patient Caseload

	No SUD	95%CI	> 50% SUD	95%CI	p
Main Source Payment (Mean %)					
Private insurance	37.4%	31.5–43.3	13.4%	9.0–17.8	0.0000
Medicare	13.6%	9.9–17.4	11.4%	8.3–14.5	0.3626
Medicaid	10.9%	6.4–15.3	21.4%	15.3–27.4	0.0065
Veterans administration	2.3%	–0.5–5.2	10.7%	3.8–17.6	0.0258
Other government/public	4.9%	2.2–7.6	20.9%	13.1–28.7	0.0001
No charge/uncompensated	2.2%	1.2–3.2	5.7%	2.6–8.7	0.0340
Self-pay	25.6%	19.5–31.7	8.9%	4.5–13.3	0.0000
Types of Health Plans (Mean %)					
“Carve Out” MC	8.3%	4.6–11.9	11.4%	6.9–15.9	0.2943
HMO or PPO-MC	12.8%	8.4–17.1	6.8%	2.5–11.0	0.0530
Private/non MC	25.4%	19.6–31.1	4.6%	2.6–6.6	0.0000
Public insurance non-MC	19.6%	14.0–25.2	35.1%	26.5–43.7	0.0030
No coverage	16.3%	11.0–21.5	25.1%	16.9–33.4	0.0748
MC health plans	27.7%	21.5–33.8	21.9%	15.4–28.5	0.2111
Non-MC plans	45.0%	38.1–51.9	39.7%	31.3–48.1	0.3407
Number of MC Panels Currently Serving	1.8	1.3–2.4	3.2	2.1–4.3	0.0375
Patient Care Income (Mean %)					
Salary	29.0%	21.1–36.8	78.3%	70.2–86.3	0.0000
Undiscounted fee-for-service	36.5%	28.8–44.2	8.7%	3.9–13.5	0.0000
Discounted fee-for-service	21.5%	15.2–27.8	10.3%	5.1–15.6	0.0075
Mean Net Income 1997	\$110,633	\$93,240–128,025	\$125,819	\$114,474–137,163	0.1520
MC=managed care					