

THE 2004 NEW JERSEY SURVEY OF MENTAL HEALTH PATIENTS ON DRUG USE AND HEALTH

APPENDIX A STUDY METHODOLOGY

I. INTRODUCTION

The New Jersey Department of Health and Senior Services, Division of Addiction Services (DAS) utilized the Substance Treatment Needs Assessment Project Survey developed by the Center for Substance Abuse and Treatment (CSAT) and administered the survey to clients receiving mental health treatment services as a supplement to its statewide telephone sample of New Jersey residents. DAS contracted with the Eagleton Institute's Center for Public Interest Polling (CPIP) to conduct the phone survey and the in-person survey of mental health clients. The statewide survey results are presented in the 2003 New Jersey Survey on Drug Use and Health. The main objective of the mental health survey supplement is to assess the levels of substance use and treatment services in New Jersey's mental health treatment population as well as identify desired treatment services.

The main objectives for the 2004 New Jersey Survey of Mental Health Patients on Drug Use and Health include:

1. Assessing the level of use of alcohol, tobacco and other drugs, and estimate the need and demand for treatment services among the mental health treatment population in New Jersey.
2. Studying correlates of substance use, abuse or dependence to help planners and policy makers make informed decisions regarding future interventions.
3. Documenting the impact of the World Trade Center attack of September 11, 2001 on substance use.
4. Comparing findings from treatment population with 2003 statewide household survey.

Institutional Review Board Approval

The Mental Health Treatment Study protocol was reviewed and approved by the Institutional Review Boards (IRBs) of the New Jersey Department of Health and Senior Services (DHSS), Rutgers, the State University of New Jersey, and the University of Medicine and Dentistry of New Jersey. The IRBs reviewed the study design, data collection instruments and consent forms prior to implementation of the study.

II. QUESTIONNAIRE DEVELOPMENT AND ADMINISTRATION

The questionnaire was initially developed by the National Technical Center and is a DSM-IV based substance dependence needs assessment. DAS and CPIP revised the questionnaire and added other items of interest to state health planners. Refinements of this draft were made after a pre-test and consultation between DAS and CPIP. The questionnaire used for the statewide household sample was essentially replicated for the mental health treatment population (see Appendix B for study questionnaire).

To conduct in-person interviewing, DAS provided an electronic version of the questionnaire which was programmed using Visual Basic which CPIP interviewers used to conduct the in-person survey on laptops. The program application allowed for the loops, rotations, randomization, and complex skip patterns in this survey instrument. This means that the interviewer does not have to keep track of substance use referenced in future questions. The programming was extensively checked and all logical errors were corrected.

The CPIP project manager was responsible for training all interviewing staff as well as the monitoring of interviews. The session included a briefing on the purpose of the survey, instructions on each item in the instrument, training on the electronic survey application, and a series of monitored practice interviews. All interviewers had experience in dealing with the mental health treatment population.

III. SAMPLE DESIGN

The study's research design was developed by the Division of Addiction Services. Using admissions and discharge data reported by mental health treatment providers to the Department of Human Services, Division of Mental Health Services on the Uniform Services Transaction Form (USTF), DAS calculated the number of open cases in the FY1999 – FY2002 USTF file for both outpatient and partial care programs by treatment provider. The number of open cases equaled the number of observations with an admission prior to July 1, 2002 and either a missing discharge or a discharge date after June 30, 2002. DAS found a total of 93,914 New Jersey residents that had not been discharged prior to July 1, 2002, comprised of 10,017 patients treated in a state-funded partial care facility and 83,897 treated in an outpatient facility. (Table A-1). Eligible clients for the study had to be 18 years of age or older and not enrolled in a MICA (Mentally ill/Chemically-addicted) program at a treatment center. In-person interviews were conducted with 700 treatment clients at facilities throughout the state. Hair testing was conducted on about two-thirds of study participants. The following details the study's sampling strategy, survey instrument, field experience, hair analysis, and data processing procedures.

A two-stage, stratified, random sample design was used for the study which grouped all publicly-funded mental health treatment agencies in the state by service type (partial care or outpatient) and by region (North, Central, South). To be eligible for the sample, a facility had to offer both partial care and outpatient services. In all, 53 agencies

met that criterion. Based on the Department of Mental Health Services classification, the Northern region includes the counties of Bergen, Essex, Hudson, Morris, Passaic and Sussex; the Central includes Hunterdon, Mercer, Middlesex, Monmouth, Ocean, Somerset, Union and Warren counties; and the Southern region includes Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Salem counties. The total population for each agency was based on the current number of open cases.

Table A-1: New Jersey Mental Health Treatment Population

Regions	Agencies	Outpatient	Partial Care
North	23	30,469	4,433
Central	20	36,389	3,874
South	10	17,039	1,710
TOTAL	53	83,897	10,017

As per agreement with participating agencies, the identity of agencies participating in the study will not be reported anywhere in this report. Since the agency size could identify the agency, a breakdown of agencies by patient volume will also be excluded from this sampling description. The principles used to sample agencies were the following:

- (1) Agencies were divided into their respective region;
- (2) Within region, an agency’s proportion of the total region’s partial care and outpatient population was determined. These proportions were then multiplied to create a standardized score which reflects the size of the agency and its contribution to the total regional mental health population;
- (3) In each region, the agencies were listed in order of highest to lowest on this standardized population score;
- (4) It was pre-determined that 6 of 23 agencies would be selected in the North, 6 of 20 agencies in the Central, and 4 of 10 agencies in the South. When an agency was selected, it would contribute to both the partial care and the outpatient samples;
- (5) A random number start was determined and a sampling interval was generated based on the number of agencies needed for each region.

For each modality, a sample of 350 patients was selected for a total sample of 700 New Jerseyans receiving mental health treatment included in the study. Once the agencies in each region were selected, the sample was determined proportional to the total population. For instance, the northern region included 36 percent of all outpatient clients so the outpatient sample for the north included 36 percent of the 350 patients, or 127 clients. Within this northern outpatient stratum, sampling was also done proportionally. Hence, if Agency A had 25% of all outpatients in the north, then 25% of

the 127 clients (or 32 clients) would come from Agency A. This proportional selection process was used to determine the partial care and outpatient sample for all agencies in all strata. The final sample distribution is included in Table A-2.

Table A-2: Sample Distribution

Regions	Agencies	Outpatient	Partial Care
North	6	127	155
Central	6	152	135
South	4	71	60
TOTAL	16	350	350

IV. FIELD PROCEDURES

Agency Participation

As discussed, the sample of 16 mental health centers was based on all publicly-funded agencies in New Jersey that provide both partial care and outpatient treatment services to adults age 18 and over. The sample size for each agency was based on the current number of open cases as reported by each agency. After the sampled agencies were drawn, letters written by Alan Kaufman (Director, Division of Mental Health Services) and Carolann Kane-Cavaiola (Assistant Commissioner, Division of Addiction Services) were sent from the state offices in May of 2003, to the directors of each selected agency briefly outlining the project and requesting their participation. Program Analysts for each county were copied in these letters. Robert Culleton, Ph.D., the Principal Investigator for the project also attended regional meetings of the Program Analysts to introduce the study and gain project support from the regional analysts in agency recruitment.

Approximately two weeks after the letters were mailed, the Eagleton's Project Manager, Gabrielle Wilders, followed up by phone requesting the opportunity to meet with agency personnel to inform treatment center representatives of the project goals, solicit their cooperation, and establish an interviewing schedule. Program Analysts were informed of these meetings and invited to attend as well. Meetings with administrators and clinical staff began on July 1, 2003 and were completed in September, 2003. All 16 agencies agreed to participate in individual sessions at each agency. All meetings were attended by Ms. Wilders, as well as the Principal Investigator at Eagleton, Chris Bruzios, Ph.D., or the Principal Investigator at DAS, Robert Culleton, Ph.D. All agencies ultimately decided to participate with the exception of one facility in the northern region which felt that their clientele was too fragile to partake in the survey, thus reducing the sample size to 15 mental health centers. A decision was made not to replace the agency and to distribute the sample among the remaining five northern facilities.

Mental Health Center staff were provided with copies of the study protocol, the questionnaire, the consent form and a fact sheet that would be given to both clinicians and

clients to provide them with basic information about the study to help initiate interest. Spanish versions of the consent form and fact sheet were also provided to centers who reported serving any Spanish only speaking clients. All in attendance were instructed not to share the questionnaire with potential participants.

Background information regarding the development of the survey, an explanation of how centers were selected and a detailed overview of how the survey would be implemented were routinely discussed. Concerns regarding client confidentiality, content of interview, reimbursement, interviewer qualifications, guidelines to elicit participation for each treatment modality, and basic needs such as room availability and scheduling were all thoroughly covered.

Sampling within Agencies

In order to be eligible for the needs assessment survey, mental health clients had to meet the following screening criteria:

- (1) The patient had to be there for a scheduled outpatient visit or currently enrolled at the facility's partial care program;
- (2) The patient had to be an adult, 18 years of age or older;
- (3) The patient could not be enrolled in the agency's MICA program.

At each mental health treatment facility, study participants were randomly selected from all those patients who met the above criteria. The first criterion was established to randomize the selection process within agencies. Eagleton worked with each agency to determine the best time to conduct such interviews. Since there is no systematic bias in when a patient is scheduled for an outpatient visit or a patient is in partial care visit, all mental health clients who met the above criteria and were at the facility in the interviewing window were eligible for selection for the needs assessment survey.

Regarding the partial care programs, the random selection proceeded as follows. Eagleton staff asked treatment program staff for an attendance list on the days that interviewers were present until the final sample amount was reached. Eagleton asked that the list exclude any client that the clinicians felt could not comprehend the consent form or anyone they felt could become agitated by the interview itself. Hence, facility staff were responsible for initial screening based on the clients mental health capacity. The list did not have to have patient names on it but clients could be identified by a number or other code by which the center staff could identify the client. Once the list was established, Eagleton would determine a sampling interval and select every "nth" person on the list. If selected patients did not want to participate, Eagleton interviewers would move down to the next person on the list. Staff would explain to the clients that the selection worked similar to a lottery system thereby alleviating any prejudice that the clients might suspect the staff of having against them. This sampling procedure occurred at almost every site with the exception of two where the staff felt more comfortable

having the clients volunteer and participate on a first come first serve basis.

For the outpatient office, Eagleton interviewers were provided office space at the facility on scheduled days. When interviewers were available at the facility, the receptionist at the treatment center would provide a study fact sheet to patients who came for scheduled outpatient office visits. Clinicians also were asked to give fact sheets to clients at the end of their sessions or remind them that the survey is taking place and if they were interested to let the receptionist know. If a client was interested in participating, Eagleton interviewers explained the subject and purpose of the survey and obtained the informed consent of the study participant. All participants were assured of their anonymity and confidentiality.

Interviewer Training

Eagleton was responsible for all interviewing of mental health clients on the project. The Eagleton project manager was responsible for the training of interviewers as well as monitoring interviews and the disposition of the sample. Eagleton conducted a comprehensive training session for all interviewers. Interviewing staff consisted of men and women from diverse racial and ethnic backgrounds that had prior exposure to mental health consumers in various settings. All interviewers received extensive training from the project manager in use of the laptop program, research interviewing techniques, confidentiality guidelines and hair sample collection prior to going into the field. Once at the agencies, the project manager would conduct an interview that the staff would observe and vice versa. As new staff were hired, they would initially be trained by the project manager and conduct practice interviews with other staff members. The project manager was available at all times either in person or via cell phone to resolve any problems or respond to any questions that arose. The project manager was present when interviewing began at a new site and then would also fill in to conduct interviews as necessary.

Staff was sent emails the week prior to going to a site that specified the centers name, address, contact persons for both partial care and outpatient programs, interviewing schedule, sample size needed, driving directions and any special instructions. Staff was equipped with laptop computers, hair sample kits, money orders and several hardcopies of the interview in the event they experienced any computer problems. Hair sample kits included lab tracking forms, rubber gloves, shears, sanitizing wipes for the shears, combs, hair sample card (so participants could clearly see how much hair was required from them), and sample collection kits. Staff would typically drop off the laptops to the Eagleton office at the end of the week. Information would be transferred into an SPSS program. The principal investigator and project manager would review each interview to make sure all information was present.

Interview Administration

The survey length was approximately 45 minutes. In addition to the interview, all participants were asked to submit a hair sample which would be used for drug testing.

Sixty-two percent of all participants submitted a hair sample. Hair testing was performed by US Drug Testing Laboratories (MecStat Labs) in Des Plaines, Illinois. MecStat Labs provided Eagleton with hair sample kits and information on the proper collection of hair samples. All Eagleton interviews were trained in this procedure. All hair samples were coded with an identification number which matched the survey identifying information to allow a link between survey and hair analysis results.

As an incentive for participation, all clients recruited for the study received \$20.00 in the form of a money order for completing the interview and could also receive an additional \$10.00 if they chose to provide a hair sample which would be used for drug testing. It was emphasized that the hair sample was completely optional; clients could conduct the interview without having to provide a hair sample. Clients were shown a sample card so they could see exactly how much hair was needed and told that the hair had to be cut as close to the scalp as possible from the crown of the head.

Hair Sampling

Hair analysis was used to validate self-report measures of substance use by providing objective, biological-based data. Hair samples were secured from 62 percent of all study participants (432 of 700 study participants). Hair samples were sufficient for testing in all but 11 cases where the quantity of hair supplied was not adequate. The hair analysis tested for the presence of five classes of drugs — amphetamines, opiates, cocaine, marijuana and phencyclidine.

As hair samples were collected, each specimen was labeled with an ID number which could be matched with the study participants ID number assigned during the in-person interview. Hair sample information also included the participants age, date of interview and site of interview. This procedure helped confirm that the proper hair sample was assigned to the interview conducted for a particular participant.

The results of hair testing are intended to validate self-report measures. However, these results need to be interpreted with caution as well. For example, it should be noted that hair testing is not very effective in detecting marijuana usage. A positive hair test result on marijuana, detecting the compound THC, generally indicates a chronic/heavy user of the drug since this compound only occurs in the hair with heavy usage. Therefore, many who admit marijuana use may not test positive; and many who do not admit marijuana use may not come up positive unless they use the drug to a great extent.

Field Experience

In total, 700 mental health treatment recipients were interviewed for the study, 350 in partial care and 350 in outpatient. The full sample was completed as outlined in Table A-2 with the sole exception being that five agencies were used in the northern region instead of six. Interviewing at the 15 agencies began on October 29, 2003 and was completed on August 16, 2004. Most interviews were conducted in English and 2% were conducted in Spanish.

Table A-3 indicates responses to questions in the J section which ask the interviewer to rate the quality of the interview. Overall, 74 percent of interviews were rated as excellent by the interviewer meaning that there were no problems at all during the interview process. Of the remaining interviews, 19% were rated as good (few problems), 6% were rated as fair (a number of problems, but acceptable overall), and 2% were rated as poor or inadequate (many problems and the overall quality was open to question).

For any interviews that were not rated as excellent, the interviewer was instructed to record one or more reasons why such a rating was recorded. Most respondents received a rating other than ‘excellent’ either because the interviewer felt they did not understand some questions in the interview (67%), they felt the respondent was rushed during the interview (11%), the respondent was offended by certain questions (9%), or there were too many interruptions or distractions (9%). Other reasons recorded by interviewers for the interview not rating as ‘excellent’ included the following: the respondent did not take the interview seriously (5%), the interview was not in the respondent’s native language (4%), the respondent appeared sick (1%), had hearing problems (2%), or seemed intoxicated (2%). Another 18% of reasons for less than ‘excellent’ interview quality were classified as something else.

Table A-3: Interview Quality

<i>Quality of information from interview* (n=700)</i>		<i>Reasons quality of information was less than “excellent”* (n=179)</i>			
Excellent	74%	did not understand questions	67%	interview not in native language	4
Good	19	respondent rushed	11	hearing problems	2
Fair	6	offended by questions	9	respondent seemed intoxicated	2
Poor/Inadequate	2	interruptions and distractions	9	respondent sick	1
* quality of interview as determined and recorded by interviewer		was not serious	5	other	18

V. DATA PROCESSING AND ANALYSIS

All survey data was directly entered by interviewers into a lap-top computer using a computer assisted interviewing software program. The computer program was developed to contain multiple consistency and error checks so as to avoid invalid or out-of-ranges responses. If interviewers entered invalid responses, the program prompts interviewers to check the response code entered. The questionnaire was also designed to account for numerous skip patterns in the questionnaire and only permit interviews to ask appropriate questions based on how previous questions were answered.

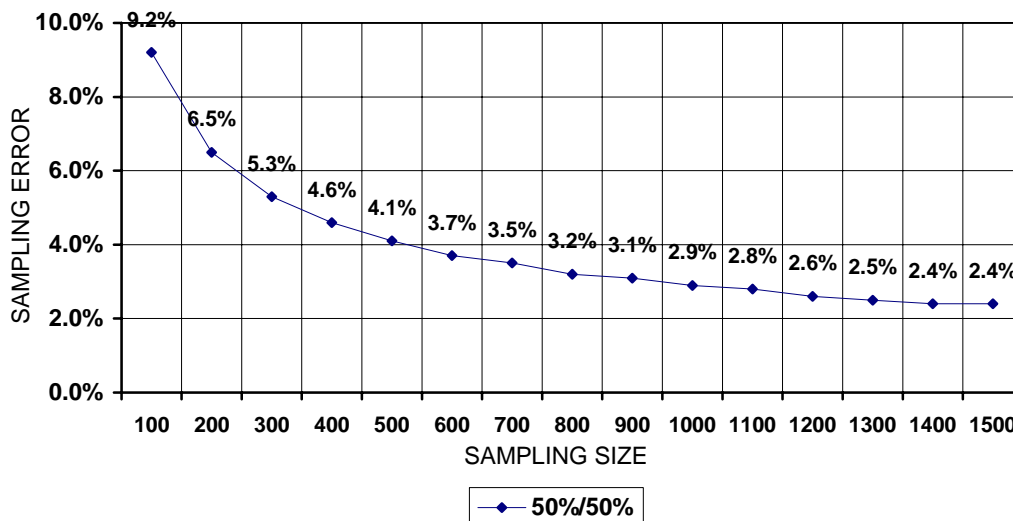
Once interviews were completed, data were converted into an SPSS (Statistical Package for the Social Sciences) system file. All hair test results were also entered into a data file and merged with the interview data based on matching identification numbers.

While many items collected in the study are reported on in this volume, the final data file contains approximately 600 variables. Volume II contains statistical tables on all core questions broken down by key demographic characteristics in the outpatient and partial care populations.

The percentages obtained in a sample survey are estimates of what the distribution of responses would be if the entire population had been surveyed. "Sampling error" is a social science term which describes the probable difference between interviewing everyone in a given population and a sample drawn from that population. The overall sampling error associated with a sample of 350 persons, for example, is ± 5.2 percent at a 95 percent confidence interval and 50/50 margins. Thus, if 47 percent of those in such a sample are found to report a particular behavior, the percentage of people in the population from which the sample is drawn would be between 41.8 percent and 52.2 percent (47 percent $\pm 5.2\%$) 95 times out of 100.

Sampling error increases as the effective sample size is reduced. For example, if statements are made based on a sample size of 400 persons, the sampling error is ± 5.0 percent. This fact must be kept in mind when comparing the responses of different groups within the sample, e.g. women compared to men. While, it perfectly acceptable in survey research to report the overall margin of sampling error, it technically should be calculated based on bi-variate responses to each individual question in a survey. The margin of sampling error is calculated by multiplying the constant associated with the desired confidence level (usually 1.96 for a 95% confidence interval) by the standard error estimate for each item.

**FIGURE A-1
MARGIN OF SAMPLING ERROR**



Readers should note that sampling error does not take into account other possible sources of error inherent in any study of public opinion, particularly when estimates are based on self-reports of “socially undesirable” behaviors.

VI. DEMOGRAPHIC PROFILE OF MENTAL HEALTH PATIENTS (Sample vs. Population)

As previously described, the sample of 700 mental health treatment recipients participating in this study were drawn from the active caseloads of 15 of New Jersey’s 53 study-eligible facilities. Table A-4 presents the demographic characteristics of the sample and the treatment population from which it was drawn and presents the comparison by geographic region. Note that while the sample was drawn at each participating agency during the period of data collection, namely, October 2003 through August 2004, the treatment population figures are from FY2002.

Table A-4 shows that the sample is fairly close to the total population on most gender and racial characteristics with the exception of the South Jersey outpatient sample having a greater proportion of females (72%) than in the treatment population (59%), and having fewer Hispanics (1% vs. 12%). Also, in the North Jersey partial care population, the sample has more whites (59%) than in the treatment population (43%). With regard to age, however, the final sample seems to consist of more older people (50+) than younger people (<35). Since there were few discrepancies in the sample population and the total population and the true population parameters could not be determined, the decision was made not to weight the data.

Table A-4: Comparing Demographic Characteristics of Sample versus Treatment Population*

Demographics (Sample %/Population %)	North				Central				South			
	Partial Care		Outpatient		Partial Care		Outpatient		Partial Care		Outpatient	
	<i>Samp</i>	<i>Pop</i>	<i>Samp</i>	<i>Pop</i>	<i>Samp</i>	<i>Pop</i>	<i>Samp</i>	<i>Pop</i>	<i>Samp</i>	<i>Pop</i>	<i>Samp</i>	<i>Pop</i>
Male	48%	50%	39%	39%	46%	49%	44%	42%	47%	51%	28%	41%
Female	52	50	61	61	54	51	56	58	53	49	72	59
White	59	43	58	62	76	72	74	71	53	65	62	68
Black	21	32	20	17	8	19	11	15	32	27	28	18
Hispanic	16	20	19	16	7	6	12	12	12	5	1	12
Other	4	5	3	4	8	3	4	3	3	3	9	3
Under 35	21	39	24	41	22	37	25	42	33	46	23	46
35-49	42	38	41	39	43	40	56	36	42	37	55	38
50 and over	37	22	35	20	36	22	20	22	25	18	23	16
*Population statistics are drawn from the USTF datasets for FY1999 – 2002 provided by the New Jersey Department of Human Services.												