OKLAHOMA

**STATE TREATMENT NEEDS ASSESSMENT PROGRAM
PHASE II**

Contract No. 270-98-7066

FINAL REPORT ON STUDY #1,

Survey of Temporary Assistance For Needy Families (TANF) Recipients

Submitted to:

CENTER FOR SUBSTANCE ABUSE TREATMENT

Submitted by:

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Substance Abuse Services
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September 30, 2001

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EXECUTIVE SUMMARY

E.1   Background

With funding from the federal Center for Substance Abuse Treatment (CSAT), the Oklahoma Department of Mental Health and Substance Abuse Services (DMHSAS) is conducting a family of studies that will supply Oklahoma with information the State needs to plan and provide effective substance abuse service for its citizens in need. The results of the studies will also meet the data reporting requirements of the federal government. The project includes four studies: (1) Surveys of Temporary Assistance for Needy Families (TANF) Recipients; (2) Survey of Criminal Justice Populations (juvenile offenders under supervision of the Office of Juvenile Affairs and the Arrestee Drug Abuse Monitoring (ADAM) Project); (3) Substance Abuse Treatment Utilization by State-funded Clients; and (4) Integration and Analysis of Data from Internal and External Sources. This document is an executive summary of the administration and results of the study of treatment utilization by state-funded clients.

E.2   Methods

The aim of the STNAP treatment utilization study was to analyze data submitted by providers to Oklahoma's central data system the Integrated Client Information System (ICIS), in conjunction with data from other sources, to determine the extent to which the goals of accessibility, appropriateness and accountability are achieved. Service utilization information from each sub-state planning region was compared to STNAP Phase I data to provide an indicator of equal access to care by region, age, gender and race. The distribution of types and amounts of services provided in each region were compared to STNAP Phase I estimates of need by level of care for an indication of the appropriateness of care given. Finally, two indicators of accountability were evaluated: admission to a lower level of care within 14 days of discharge from detox and residential treatment; and re-admission rates within 30 days among clients discharged from residential treatment.

Separate analyses were conducted for each of the areas of concern: access, appropriateness and accountability. Level of access to care was determined by a comparison of DMHSAS client subgroups and Oklahoma STNAP Phase I results for each of the eight sub-state planning areas. The extent to which the

distribution of clients served matched the distribution of need in comparable sub-groups in the general population of a region provided a measure of accessibility to services. Because ICIS is a longitudinal database, multiple years were compared to assess whether access had changed over time.

Appropriateness of care was evaluated by comparing the distribution of people served at each level of care with STNAP Phase I survey results concerning which levels of care clients need in each region.

For the accountability portion of the analysis, correlating case mix variables with outcomes was the focus. Two statistical methods, logistic regression and survival analysis, were utilized to demonstrate the ability to evaluate the relationships among client characteristics and treatment outcomes.

E.3   Terms and Definitions

The following are terms used in the Treatment Utilization Study, Study #3. Definitions of treatment need, treatment utilization and gap analysis are from the CSAT Database Linkage Core Protocol (2001).

Treatment Need and Utilization.   A person is in "need" of treatment if he or she meets accepted criteria for alcohol or drug abuse or dependence at any time during the year prior to the time a treatment need estimate for the area is produced. The number of clients in treatment during a given period is referred to as treatment utilization.

Gap Analysis. Gap Analysis is a frequently used term that focuses assessment efforts on the key differences between treatment need, demand, and utilization. For this study, gap analysis looks at differences between available treatment resources that are in place within a planning area or for a socio-demographic group and the estimated need for services within the same geographic area and socio-demographic group.

Logistic Regression.   Logistic regression is a form of statistical modeling that is often appropriate for categorical outcome variables. It describes the relationship between a categorical response variable and a set of explanatory variables. While these response variables can be nominally or ordinally scaled, each performance measure examined in this study had a nominal response variable (Stokes, et al., 1950).   The SAS procedure PROC LOGISTIC was used to perform the analysis.

Survival Analysis.   This study utilized Cox Proportional Hazards Survival Regression, a statistical analysis model which uses the times of survival for a group of subjects to generate a survival curve. For example, the number of clients discharged from detox services who received a lower level of care within 14 days of discharge. The proportional-hazards method assesses the effect of

each predictor on the shape of the survival curve. This method computes a coefficient for each predictor variable that indicates the direction and degree of affect that the predictor has on the survival curve. Zero means that a variable has no effect on the curve while a positive variable indicates that larger values of the variable are associated with the outcome. This method provides a customized survival curve for any particular combination of predictor values and a measure of the sampling error associated with each predictor's coefficient. This allows a determination of variables' coefficients that are significantly different from zero, that is, which variables are significantly related to survival. The SAS procedure PHREG was used to perform the analysis.

E.4   Data Analysis Methods

E.4.1 Accessibility of Care

For analysis of accessibility of care and system changes over time for the DMHSAS client population, services for clients who received treatment in FY1998, FY1999 or FY2000 were extracted as treatment utilization data. Respondents from the Oklahoma STNAP Phase I general household survey who were determined to be in need of treatment and whose reported income and household size indicated indigence were included as the number in need of treatment. The poverty restriction ensured the comparison between needed and provided services, and more accurately represented common treatment recipients in the publicly funded system.

Gap analysis was conducted by comparing the number in need of treatment from the 1998 survey to the treatment utilization group from each of the three years, FY1998, FY1999 and FY2000 (assuming no change in need occurred over the three year period). The gap, or proportion not receiving treatment, was calculated for those estimated in need of treatment and those expected to demand treatment for each year by RAB area, sex, race, age and marital status. Confidence intervals were calculated for each of the groups to determine whether the gap between need and utilization was significant.

E.4.2 Appropriateness of Care

Appropriateness was judged by a comparison of levels of care provided in each region with those identified as needing treatment among indigent persons responding to the Phase I household survey by level of care needed. The level of care needed was determined using a crosswalk between the STNAP survey questionnaire used in the Phase I general household survey and the American Society of Addiction Medicine (ASAM) Patient Placement Criteria. DMHSAS contracted with David Gastfriend, M.D., to provide the crosswalk. Dr. Gastfriend is the Director of the Addiction Research Group, Massachusetts General Hospital, and Associate Professor of Psychiatry at Harvard Medical School. After

determining the level of care needed and utilized during FY1998, a gap analysis was conducted using the same methods as in the accessibility study.

E.4.3 Accountability

For analysis of accountability, the efficacy of two statistical methods for modeling the relationships among risk variables and FY2000 outcomes (residential re-admission within 30 days and continuum of care from detox and residential services to a lower level of care within 14 days) was studied. First, the effect of selected client demographic variables on treatment outcome was measured using logistic regression and verified using split-half cross-validation (Hornbrook, 1982; Blumberg, 1986). Clients were randomly split into two subsets. Half was used for model development and the other half for model validation. The mean square error (MSE) of the residuals, i.e., the differences between estimated and actual outcomes for the whole model development subset was used to evaluate the model derived for each outcome.

Proportional-hazards survival analysis is the second analytical method that was used to examine outcomes (Bailey, 1988; Lee, 1980). Proportional-hazards survival analysis estimates the likelihood a person will remain in a given state (e.g., sober or non-substance abusing) following a starting event (e.g., completion of substance abuse treatment). Using the same subsets of clients used in the logistic regression analysis and right censoring the data, survival functions were estimated for combinations of client characteristics.

Prior to conducting either of the previously mentioned analyses, the RANUNI function in SAS was used to split the data by assigning a random number with a uniform distribution. The data were then ordered by the random number, and the first half of the data was used to build the model while the second half was used to validate the model.

Each of the categorical covariates was coded into a set of 0,1 dichotomous variables so comparisons could be made between the effect of the different levels of each covariate. To determine which of the covariates should be included in the development of each model, a Pearson correlation matrix was used to evaluate the relationship between the covariates and the outcome or dependent variable. If a covariate was significant at the 0.25 alpha level, that covariate was included in the analyses to develop the model. In addition, two-way interactions between those covariates were included in the model.

Following the model development, the results were applied to the remaining half of the data (the validation set). For example, each of the variables in the validation data set was multiplied by its corresponding model coefficient and the logistic probability or survival function was calculated. The MSE of the residuals for each model and its validation set were compared to evaluate the fit of the model. Similar residual values, i.e., with differences close to zero, indicated the

model was a good fit to the data from the validation set, i.e., data which were not included in the development of the model.

E. 5   Results

E.5.1 Accessibility of Care

- **For FY98, a statewide treatment gap of 72.18 percent was found. The lowest gap among sub-state planning regions was experienced by Tulsa (55.37%), while the Northwest regional gap was the highest (85.38%). Only two of the eight sub-state planning regions (East Central and Southeast) had a decrease in treatment gap from FY98 to FY00. The statewide treatment gap increased from 72.2 percent in FY98 to 73.5 percent in FY00.**

- **Males had a slightly smaller treatment gap than females for all three years; however, the difference narrowed from FY98 to FY00 (70.9% vs. 74.4%, respectively, in FY98; 73.1% vs. 74.2%, respectively, in FY00). The gap for males increased over those three years while the gap for females remained approximately the same.**

- Hispanics had the highest treatment gap in FY98 at 86.3 percent, followed by Whites with a gap of 74 percent, and American Indians at 70 percent. The "other" category had the smallest gap of 60 percent. This same pattern held true for FY99 and FY00. The gap increased for Whites in the three years studied, while decreasing for the other three racial categories.

- In FY98, the youngest and the oldest age groups were the least likely to utilize treatment, with 18- to 24-year olds having a treatment gap of 83.3 percent and 45 years or older having a gap of 79.1 percent. Also in FY98, persons in the age range of 35 to 44 years of age had the smallest gap (47.4%) followed by 25- to 34-year olds (71%). The treatment gap increased over the three study years for each age group, except for the 18 to 24-year olds, who experienced a 2.3 percent decrease.

- Examination of differences among those in need of treatment in FY98 and those receiving treatment by region and sex revealed significant gap differences (p<.05) across the state, with the exception of the two southern regions. The treatment gap was significant for both males and females in six of the sub-state regions, however, in the Tulsa region more females were served than were identified by the survey as needing treatment.

- With the exception of the Northeast, significant gap differences (p<.0001) were found among the racial categories in each sub-state region.

American Indians were under-served in six sub-state regions, while Whites and the "other" race were under-served in four.

- Further demographic analysis revealed gap differences among age categories for all sub-state regions. Five of the regions showed significant differences between those in need of treatment and the number served for each of the four age groups. The Southwest under-served clients 45 years or older, the Northwest under-served clients 35 years or older, and the Northeast under-served clients 18 to 34 years of age.

E.5.2 Appropriateness of Care

- The statewide treatment gap for social and medical detox services increased from 86.4 percent in FY98 to 88.6 percent in FY00.

- The only level of care in which the statewide treatment gap decreased was outpatient, 86.2 percent in FY98 to 82.6 percent in FY00.

- In the eight sub-state planning regions, many treatment gaps by levels of care were extremely high, ranging from 77.9 percent to 96.3 percent, and increased across the years studied.

- Negative treatment gaps were discovered in the East Central and Tulsa regions, that is, more clients were served than were estimated to need outpatient treatment. However, this may be due to clients needing a higher level of care but receiving outpatient treatment due to a lack of the appropriate level of care available in that region.

- The treatment gap in outpatient treatment decreased by half in the Oklahoma City Metro Region from FY98 to FY00. Again, this may be due to higher levels of care unavailable in this area, as demonstrated by the increasing gaps in detox and residential/community treatment.

E.5.3 Accountability

- Accountability was measured by results from the evaluation of three outcomes: admission to a lower level of care (residential, community living or outpatient) within 14 days of discharge from detox; admission to a lower level of care (community living or outpatient) within 14 days of discharge from residential treatment; and re-admission to residential treatment within 30 days of discharge.

- Among clients discharging from detox services, 76 percent had a lower level of care within 14 days. This is three times the state standard (25%).

- Nearly half of the clients discharging from residential treatment (46.1%) received a lower level of care within 14 days. Again, this is over the state standard of 35 percent.

- The rate of clients re-admitted to residential treatment within 30 days of discharge (3.7%) was slightly higher than the state standard (2%).

E.5.3.1 Examining Residential Clients Admitting to Lower Level within 14 Days Using Logistic Regression

- Males with a slight drug use problem based on the ASI are 14 times more likely than females with an extreme drug use problem to be admitted to a lower level of care within 14 days.

- Clients with a more extreme drug problem based on the ASI are almost 42 times more likely to admit to a lower level of care within 14 days than clients with a slight drug problem.

- In the split-half cross validation study, the mean square errors (MSEs) for the model and validation sets were calculated, resulting in 0.1848 and 0.3036, respectively. Results from the validation set indicated a difference in the model and validation MSEs of -0.1188.

E.5.3.2 Examining Detox Clients Admitting to Lower Level within 14 Days Using Logistic Regression

- Clients who had never married were 13 times more likely to admit to a lower level of care than previously married clients. The fit of the model was tested using the Hosmer and Lemeshow Goodness-of-Fit Test resulting in a chi-square value of 4.3764 (p=0.8217) and the c-statistic = 0.714. A c-statistic of 0.70 or higher is preferred with a model containing dummy variables. Both model statistics indicated a good model fit.

- The model results were applied to the validation data set. The MSE for the model was 0.1625 and the MSE for the validation set was 0.1576. This resulted in a difference in MSEs of 0.0049, indicating a good fit to the validation data set.

E.5.3.3 Examining Re-admission to Residential Treatment within 30 Days of Discharge Using Logistic Regression

- A client whose education is limited to high school is 8.5 times more likely to re-admit to residential treatment than a client with some college education. Although, as the high school graduate ages, he or she is less likely to re-admit to residential treatment than a younger client with some

college. The goodness-of-fit test indicated a good model fit but the c-statistic was low compared to the preferred 0.70 value.

- The split-half cross validation results were almost identical. The MSEs of the model data and the validation data, 0.0352 and 0.0350, respectively, were compared resulting in very little difference (0.0002).

E.5.3.4Examining Residential Clients Admitting to Lower Level within 14 Days Using Survival Analysis

- Lower functioning clients and those with no or slight psychiatric problems were more likely to admit to a lower level of care than higher functioning clients and clients with extreme psychiatric problems.

- The interaction between level of functioning and psychiatric status was also significant. Clients with a lower level of functioning and no or slight psychiatric problems were less likely to move to a lower level of care than those with higher functioning and extreme psychiatric problems.

- There was a slight difference of 0.0051 between the model MSE (0.2199) and the validation data MSE (0.2148) indicating the model was a good fit to the data.

E.5.3.5Examining Detox Clients Admitting to Lower Level within 14 Days Using Survival Analysis

- Analysis of time to admission to a lower level of care following discharge from detox indicated that current residence was the only covariate significant at the 0.05 alpha level.

- Clients living on the street were less likely to be admitted to a lower level of care than clients living in a supported living environment.

- When comparing the MSE of the model data to the MSE of the validation data, 0.2199 and 0.2148, respectively, the difference of 0.0051 indicates a good model fit.

E.5.3.6Examining Re-Admission to Residential Treatment within 30 Days Using Survival Analysis

- Results indicate that older clients were more likely to re-admit than younger clients, clients with extreme medical problems were more likely to re-admit than clients with no or slight medical problems, and clients with extreme legal problems were more likely to re-admit than clients with slight legal problems.

- The MSE of the model was 0.8951 compared to the MSE of the validation data, 0.8968. The difference of 0.0017 indicates the model performed well at predicting the outcome.

E.6   Summary

The higher gaps between estimation of treatment need and actual clients served in the Southwest and Northwest sub-regions compared with the other six sub-state regions are possibly indicative of fewer treatment facilities operating in the western part of Oklahoma. However, the existence of gaps of at least 55.4 percent for all sub-state regions serves as an impetus for ODMHSAS to examine statewide needs for more equitable provision of services, as well as increased dissemination of information intended to attract people in need of services.

Treatment gaps are even greater when examined by level of care in each region. These estimates clearly show the need for more intensive levels of care, i.e., detox, residential and community living programs in all regions. Beyond these initial results, the algorithm can be further refined to indicate treatment gap for specific populations such as pregnant and parenting women and minority groups. The ability to crosswalk from the STNAP needs assessment questionnaire to each of the six dimensions of the ASAM Client Placement Critieria provides administrators with a more refined measure of treatment need than has been available in the past. This enhancement should greatly facilitate treatment planning.

The utility of logistical regression and survival analysis were both demonstrated as effective methods of exploring outcomes of substance abuse treatment clients. The validation analyses indicated that all of the models fit reasonably well. The selection of one method over the other is subject to the preference of the researcher, informed by an understanding that logistical regression takes into account the occurrence of an outcome, while survival analysis additionally accounts for the timing of the outcome. If the outcome is not dependent on time, such as the change in an ASI score or level of functioning score, logistic regression would be a good choice. When time is a factor, as with the three outcomes analyzed in this study, survival analysis would be a reasonable method of analysis.

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different from zero, that is, which variables are significantly related to survival. The SAS procedure PHREG was used to perform the analysis.

E.4   Data Analysis Methods

E.4.1 Accessibility of Care

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E.4.3 Accountability

For analysis of accountability, the efficacy of two statistical methods for modeling the relationships among risk variables and FY2000 outcomes (residential re-admission within 30 days and continuum of care from detox and residential services to a lower level of care within 14 days) was studied. First, the effect of

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Following the model development, the results were applied to the remaining half of the data (the validation set). For example, each of the variables in the validation data set was multiplied by its corresponding model coefficient and the logistic probability or survival function was calculated. The MSE of the residuals for each model and its validation set were compared to evaluate the fit of the model. Similar residual values, i.e., with differences close to zero, indicated the model was a good fit to the data from the validation set, i.e., data which were not included in the development of the model.

E. 5   Results

E.5.1   Accessibility of Care

- **For FY98, a statewide treatment gap of 72.18 percent was found. The lowest gap among sub-state planning regions was experienced by**

Tulsa (55.37%), while the Northwest regional gap was the highest (85.38%). Only two of the eight sub-state planning regions (East Central and Southeast) had a decrease in treatment gap from FY98 to FY00. The statewide treatment gap increased from 72.2 percent in FY98 to 73.5 percent in FY00.

- **Males had a slightly smaller treatment gap than females for all three years; however, the difference narrowed from FY98 to FY00 (70.9% vs. 74.4%, respectively, in FY98; 73.1% vs. 74.2%, respectively, in FY00). The gap for males increased over those three years while the gap for females remained approximately the same.**

- Hispanics had the highest treatment gap in FY98 at 86.3 percent, followed by Whites with a gap of 74 percent, and American Indians at 70 percent. The "other" category had the smallest gap of 60 percent. This same pattern held true for FY99 and FY00. The gap increased for Whites in the three years studied, while decreasing for the other three racial categories.

- In FY98, the youngest and the oldest age groups were the least likely to utilize treatment, with 18- to 24-year olds having a treatment gap of 83.3 percent and 45 years or older having a gap of 79.1 percent. Also in FY98, persons in the age range of 35 to 44 years of age had the smallest gap (47.4%) followed by 25- to 34-year olds (71%). The treatment gap increased over the three study years for each age group, except for the 18 to 24-year olds, who experienced a 2.3 percent decrease.

- Examination of differences among those in need of treatment in FY98 and those receiving treatment by region and sex revealed significant gap differences (p<.05) across the state, with the exception of the two southern regions. The treatment gap was significant for both males and females in six of the sub-state regions, however, in the Tulsa region more females were served than were identified by the survey as needing treatment.

- With the exception of the Northeast, significant gap differences (p<.0001) were found among the racial categories in each sub-state region. American Indians were under-served in six sub-state regions, while Whites and the "other" race were under-served in four.

- Further demographic analysis revealed gap differences among age categories for all sub-state regions. Five of the regions showed significant differences between those in need of treatment and the number served for each of the four age groups. The Southwest under-served clients 45 years or older, the Northwest under-served clients 35 years or older, and the Northeast under-served clients 18 to 34 years of age.

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- The only level of care in which the statewide treatment gap decreased was outpatient, 86.2 percent in FY98 to 82.6 percent in FY00.

- In the eight sub-state planning regions, many treatment gaps by levels of care were extremely high, ranging from 77.9 percent to 96.3 percent, and increased across the years studied.

- Negative treatment gaps were discovered in the East Central and Tulsa regions, that is, more clients were served than were estimated to need outpatient treatment. However, this may be due to clients needing a higher level of care but receiving outpatient treatment due to a lack of the appropriate level of care available in that region.

- The treatment gap in outpatient treatment decreased by half in the Oklahoma City Metro Region from FY98 to FY00. Again, this may be due to higher levels of care unavailable in this area, as demonstrated by the increasing gaps in detox and residential/community treatment.

E.5.3 Accountability

- Accountability was measured by results from the evaluation of three outcomes: admission to a lower level of care (residential, community living or outpatient) within 14 days of discharge from detox; admission to a lower level of care (community living or outpatient) within 14 days of discharge from residential treatment; and re-admission to residential treatment within 30 days of discharge.

- Among clients discharging from detox services, 76 percent had a lower level of care within 14 days. This is three times the state standard (25%).

- Nearly half of the clients discharging from residential treatment (46.1%) received a lower level of care within 14 days. Again, this is over the state standard of 35 percent.

- The rate of clients re-admitted to residential treatment within 30 days of discharge (3.7%) was slightly higher than the state standard (2%).

E.5.3.1 Examining Residential Clients Admitting to Lower Level within 14 Days Using Logistic Regression

- Males with a slight drug use problem based on the ASI are 14 times more likely than females with an extreme drug use problem to be admitted to a lower level of care within 14 days.

- Clients with a more extreme drug problem based on the ASI are almost 42 times more likely to admit to a lower level of care within 14 days than clients with a slight drug problem.

- In the split-half cross validation study, the mean square errors (MSEs) for the model and validation sets were calculated, resulting in 0.1848 and 0.3036, respectively. Results from the validation set indicated a difference in the model and validation MSEs of -0.1188.

E.5.3.2 Examining Detox Clients Admitting to Lower Level within 14 Days Using Logistic Regression

- Clients who had never married were 13 times more likely to admit to a lower level of care than previously married clients. The fit of the model was tested using the Hosmer and Lemeshow Goodness-of-Fit Test resulting in a chi-square value of 4.3764 (p=0.8217) and the c-statistic = 0.714. A c-statistic of 0.70 or higher is preferred with a model containing dummy variables. Both model statistics indicated a good model fit.

- The model results were applied to the validation data set. The MSE for the model was 0.1625 and the MSE for the validation set was 0.1576. This resulted in a difference in MSEs of 0.0049, indicating a good fit to the validation data set.

E.5.3.3 Examining Re-admission to Residential Treatment within 30 Days of Discharge Using Logistic Regression

- A client whose education is limited to high school is 8.5 times more likely to re-admit to residential treatment than a client with some college education. Although, as the high school graduate ages, he or she is less likely to re-admit to residential treatment than a younger client with some college. The goodness-of-fit test indicated a good model fit but the c-statistic was low compared to the preferred 0.70 value.

- The split-half cross validation results were almost identical. The MSEs of the model data and the validation data, 0.0352 and 0.0350, respectively, were compared resulting in very little difference (0.0002).

E.5.3.4 Examining Residential Clients Admitting to Lower Level within 14 Days Using Survival Analysis

- Lower functioning clients and those with no or slight psychiatric problems were more likely to admit to a lower level of care than higher functioning clients and clients with extreme psychiatric problems.

- The interaction between level of functioning and psychiatric status was also significant. Clients with a lower level of functioning and no or slight psychiatric problems were less likely to move to a lower level of care than those with higher functioning and extreme psychiatric problems.

- There was a slight difference of 0.0051 between the model MSE (0.2199) and the validation data MSE (0.2148) indicating the model was a good fit to the data.

E.5.3.5 Examining Detox Clients Admitting to Lower Level within 14 Days Using Survival Analysis

- Analysis of time to admission to a lower level of care following discharge from detox indicated that current residence was the only covariate significant at the 0.05 alpha level.

- Clients living on the street were less likely to be admitted to a lower level of care than clients living in a supported living environment.

- When comparing the MSE of the model data to the MSE of the validation data, 0.2199 and 0.2148, respectively, the difference of 0.0051 indicates a good model fit.

E.5.3.6 Examining Re-Admission to Residential Treatment within 30 Days Using Survival Analysis

- Results indicate that older clients were more likely to re-admit than younger clients, clients with extreme medical problems were more likely to re-admit than clients with no or slight medical problems, and clients with extreme legal problems were more likely to re-admit than clients with slight legal problems.

- The MSE of the model was 0.8951 compared to the MSE of the validation data, 0.8968. The difference of 0.0017 indicates the model performed well at predicting the outcome.

E.6 Summary

The higher gaps between estimation of treatment need and actual clients served in the Southwest and Northwest sub-regions compared with the other six sub-state regions are possibly indicative of fewer treatment facilities operating in the western part of Oklahoma. However, the existence of gaps of at least 55.4

percent for all sub-state regions serves as an impetus for ODMHSAS to examine statewide needs for more equitable provision of services, as well as increased dissemination of information intended to attract people in need of services.

Treatment gaps are even greater when examined by level of care in each region. These estimates clearly show the need for more intensive levels of care, i.e., detox, residential and community living programs in all regions. Beyond these initial results, the algorithm can be further refined to indicate treatment gap for specific populations such as pregnant and parenting women and minority groups. The ability to crosswalk from the STNAP needs assessment questionnaire to each of the six dimensions of the ASAM Client Placement Critieria provides administrators with a more refined measure of treatment need than has been available in the past. This enhancement should greatly facilitate treatment planning.

The utility of logistical regression and survival analysis were both demonstrated as effective methods of exploring outcomes of substance abuse treatment clients. The validation analyses indicated that all of the models fit reasonably well. The selection of one method over the other is subject to the preference of the researcher, informed by an understanding that logistical regression takes into account the occurrence of an outcome, while survival analysis additionally accounts for the timing of the outcome. If the outcome is not dependent on time, such as the change in an ASI score or level of functioning score, logistic regression would be a good choice. When time is a factor, as with the three outcomes analyzed in this study, survival analysis would be a reasonable method of analysis.

STUDY #1: SURVEYS OF TEMPORARY ASSISTANCE FOR NEEDY FAMILIES (TANF) RECIPIENTS

1. INTRODUCTION AND BACKGROUND

1.1 Overview of the Oklahoma Studies

The Oklahoma Department of Mental Health and Substance Abuse Services (DMHSAS), the Single State Agency for alcohol and drug abuse services in Oklahoma, has conducted a family of studies that will help meet the data reporting requirements of the federal government, as well as supply Oklahoma with information the State needs to plan and provide effective substance abuse services for its citizens in need. The family of studies has been conducted in two phases of the State Treatment Needs Assessment Program (STNAP) funded by the federal Center for Substance Abuse Treatment. The first phase, completed in 1999, included modules of work that addressed three population groups: an adult household telephone survey; a targeted household telephone survey of American Indians; and a face-to-face survey of the corrections population, including inmates, probationers and parolees. In addition, a social indicator analysis was performed to correlate social, economic, treatment and criminal justice data with survey results. Finally, data from the four studies were integrated and distributed to planners, administrators, other policy makers, and researchers.

This second phase includes modules of work that address two population groups: a telephone and face-to-face survey of Temporary Assistance for Needy Families (TANF) recipients, and a face-to-face survey of two segments of the criminal justice population: juvenile offenders under supervision of the Oklahoma Office of Juvenile Affairs (OJA) and new arrestees at the Tulsa County Jail. In addition, treatment utilization data from DMHSAS-funded clients were studied, along with Phase I treatment data, to evaluate the gap between the need for treatment and treatment utilization. The final module integrates results from the other modules in the second phase, results from the first STNAP and other substance abuse studies to provide planners, administrators, other policy makers and researchers with a comprehensive overview of substance abuse treatment needs and related issues in each county and region of the state.

Goals and Objectives of Oklahoma's Needs Assessment Program. New drug court and community sentencing initiatives, welfare reform and the continuing high rate of incarceration of women in Oklahoma, make the information compiled under the goals and objectives of the Phase II STNAP project especially important for planning programs, evaluating services and assessing system changes.

There were five broad goals for Oklahoma's Phase II application. The first was to develop sound statewide and sub-state estimates of treatment need and

treatment demand among women and men receiving TANF benefits. The objectives for this goal were to (1) conduct a substance abuse needs assessment survey of TANF clients using a federally-approved protocol, (2) summarize results, and (3) share findings with Department of Human Services, Employment Security Commission and other agencies working with TANF clients.

The second broad goal was to develop scientifically-sound statewide and local estimates of treatment need and treatment demand among members of Oklahoma's criminal justice population. The objectives for the second project goal were to use established national protocols to (1) conduct a face-to-face survey of adolescents in custody of the state juvenile justice system, (2) summarize results and share findings with state child-serving agencies for planning, funding and evaluating substance abuse treatment and related services for adolescents, (3) conduct an Arrestee Drug Abuse Monitoring (ADAM) project including face-to-face surveys and urine samples at the Tulsa, Oklahoma, county jail, and (4) compare the ADAM findings with the Oklahoma County Jail ADAM site and national ADAM findings, and (5) share results with treatment planners, local law enforcement, and other agencies working with criminal justice.

The third broad goal of Oklahoma's project was to conduct a treatment utilization study. Data submitted by providers to Oklahoma's central data system were compared to Phase I STNAP data to provide an indicator of the gap between need for treatment and treatment utilization. The objectives for the third project goal were to (1) compare service utilization information from each sub-state region by age, gender and race to the Phase I STNAP Household Survey data to provide an indicator of whether these groups have equal access to care, (2) compare services utilization information by level of care to results from the Phase I STNAP Household Survey data, by level of care, to provide an indicator of whether these groups are receiving appropriate care (3) conduct an analysis of accountability by evaluating performance indicators and (4) share findings with treatment planners, state legislators, and stakeholders.

The fourth broad goal of Oklahoma's project was to create an integrated data repository from Phase I and Phase II needs assessment results, other DMHSAS data, and external data sources. This repository will be used to identify and analyze the gaps between available and needed services for geographic regions, target populations, and levels of care. The objectives for the fourth goal were to (1) integrate Phase I and Phase II needs assessment results, (2) integrate needs assessment results with service utilization information from the DMHSAS client data system, (3) merge those two sources with performance and outcome information from sources compiled under the Department's CSAT-funded Treatment Outcomes and Performance Pilot Studies (TOPPS) project, (4) integrate with other external data sources, such as the State Health Department's Behavioral Risk Factor Surveillance Survey responses and the National Household Survey on Drug Abuse data, and (5) use the results by

region, target population, and level of care to analyze gaps in services; to plan for resource allocation; to comply with statutory requirements for SAPT Block Grant reporting; and to perform policy analysis.

A fifth broad goal of the needs assessment studies was to cooperate with CSAT, the technical assistance contractor, and other states by participating in conferences, interstate projects, reports on methodology, data sharing, and other reporting as directed by CSAT.

1.2   Geography, Regional Subdivisions, and Population

Census 2000 reported a population of about 3.4 million persons including 2.6 million adults 18 years and older in Oklahoma. Oklahoma has 77 counties and 2 major metropolitan areas. DMHSAS has established "Regional Advisory Boards" (RABs) in each sub-state area to provide the Department information about local interests and concerns, and to provide feedback to planners and other administrators. The map in Figure 1 shows the sub-state planning areas.
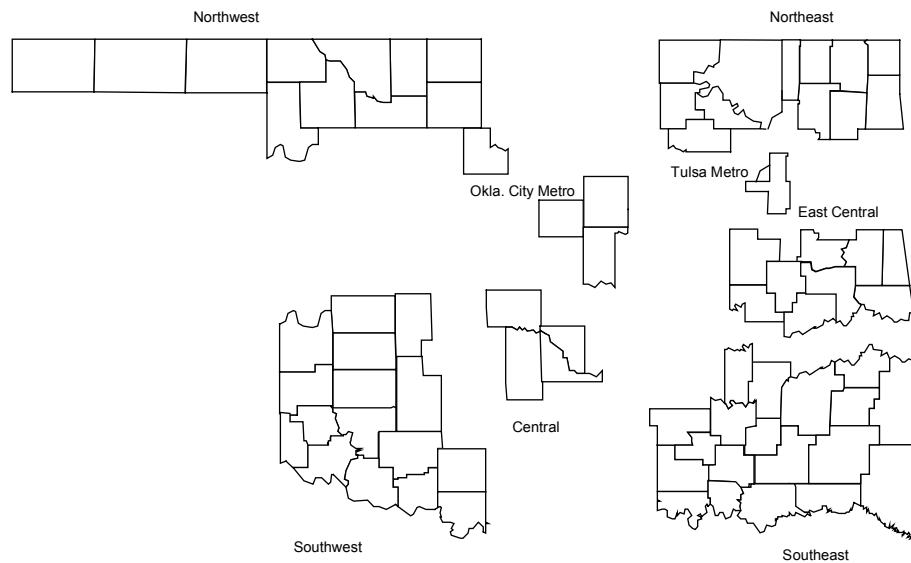
Figure 1. Map Of Regional Advisory Board (RAB) Sub-State Planning Areas

The document is a report on the administration and results of the Temporary Assistance to Needy Families (TANF) Surveys. Results of this project will fill an important void in information regarding substance use and need for treatment among TANF recipients to the Department, treatment planners, providers and advocates.

1.3 Purpose of the Temporary Assistance for Needy Families Study

In Oklahoma, substantial effort has been committed to implementing welfare reform, including a focus on the plight of welfare mothers suffering from substance abuse disorders. Welfare reform has established finite eligibility periods for many support programs and, as a result, has a significant impact on substance abuse clients and services. The impending termination of services brings new pressure on participants to find employment before benefits expire. Case workers at the Department of Human Services (DHS) report substance abusers in TANF programs have had the most difficulty coping with the system changes and are among the most difficult to place in jobs. The need for treatment among these welfare clients has manifested itself as demand for treatment, since recovery is an important aspect of employability. TANF recipients with substance abuse disorders are among the least likely to be employable and, therefore, they and their children are most likely to be without resources when TANF program benefits expire. Understanding TANF families, their treatment needs and their responses to welfare reform will help predict the demand for treatment services, and help state agencies allocate resources to integrate welfare services, substance abuse treatment and employment services.

It is important for anyone planning services for TANF clients to identify the need and potential demand for substance abuse treatment in the TANF population. Based on their experience, DHS staff estimated the proportion in need of treatment is much larger than that in the overall state population. The survey of TANF families was designed to provide information to support the continued development of interagency strategies to address the full range of clients' needs in current and future welfare environments.

In one innovative approach to these problems, DMHSAS, DHS, State Employment Security Commission (OESC), Work Force Investment Boards, and a local treatment provider implemented a pilot project to integrate treatment and vocational rehabilitation services for TANF clients in one region of the state. This project has participated in the National Center on Addiction and Substance Abuse at Columbia University CASAWorks for Families grant initiative funded by the Robert Wood Johnson Foundation and the Center for Substance Abuse Treatment and was implemented by the CASA. The project was recently recognized by CASA for its efforts. In addition, DHS has negotiated a contract with DMHSAS for Fiscal Year 2002 to provide substance abuse treatment for TANF clients. This contract will provide the DMHSAS with funding specifically targeted for TANF recipients in need of substance abuse treatment. Results from the TANF survey will be provided to the planners and treatment providers to assist successful implementation of the contract.

2.   SURVEY METHODS

For the TANF survey (Study #1), Oklahoma followed the STNAP Survey Core Protocol developed by the Center for Substance Abuse Treatment (CSAT). The telephone survey was a cost-effective method for obtaining a scientifically valid sample of responses from TANF recipients across the state and within sub-state regions. However, DHS reports 35.8 percent of all TANF recipients in Oklahoma do not have telephones in their residence. Considering this limitation, a face-to-face survey component was added to the study to evaluate the bias of using telephone surveys and to determine whether there is a difference in drug use among those with telephones and those without.

2.1   Literature on Telephone and Face-to-Face Surveys

There are three general methodological issues to consider when deciding between telephone and face-to-face interviews: response rates, validity of responses, and overall costs. Beyond this, the unique substantive nature of the present study demands that we take into account two further related issues: the population being examined (i.e., low-income families receiving governmental assistance) and the potentially sensitive nature of the topics covered in the survey (i.e., substance abuse and treatment needs). The empirical literature describing these topics is too broad to review here (though for various aspects related to this study, see Groves, 1988, 1978; Herzog and Rogers, 1988; Hirst and Goeltz, 1985; Jackson and Ivanoff, 1999; Maynard and Schaeffer, 1997), but a brief summary of the literature associated with the unique characteristics of this study follows.

Computer-assisted telephone interviewing (CATI) has several advantages over face-to-face interviews. These include (1) increased supervision of interviewers and thus more control over and standardization of interviews, (2) reduction in the time required to complete the total number of interviews, and (3) centralized results, including simultaneous database construction (Fuchs, 1995). One well-known problem germane to this study, however, is that telephone-based surveys face difficulty reaching lower-income respondents. With certain types of research designs and research questions, it may be possible to reduce the amount of error by adjusting estimates to reflect income level (see Greenfield, Midanik, and Rogers, 2000), but the entire population represented in this project is low-income. Therefore, it is more appropriate to supplement the telephone interviews with face-to-face interviews, especially given the potentially sensitive nature of the questions (Jackson and Ivanoff, 1999).

Face-to-face interviews have certain advantages, as well. First, it is often easier to identify and contact certain populations in person rather than telephonically. Second, it is more likely that a rapport between the interviewer and the

respondent will be established, which helps the interviewer to gain the trust of the respondent, especially when discussing sensitive topics (Fuchs, 1995; Renzetti and Lee, 1993; van Meter, 2000). Further, it may be easier in person than via telephone to get beyond the household gatekeeper, thereby increasing the response rate. Several studies suggest that there are no significant differences between responses received from telephone and face-to-face interviewing, even when examining sensitive issues (for example, see Reuband and Blasius, 1996). However, other results reveal that face-to-face interviews are preferred by respondents, since this seems to increase the importance of the interview in the mind of the respondent and reassures the respondent of the legitimacy and confidentiality of his/her answers (Groves, 1979).

In sum, the substantive requirements of any survey should always dictate the choice of methodology. Further, both telephone and face-to-face survey methodologies provide unique advantages and disadvantages. The present study of substance abuse and treatment needs among low-income families receiving TANF assistance was designed to benefit from the advantages of the two interview modes. This approach also provides the opportunity to advance our knowledge about the differences between these two modes with respect to the sensitive questions being asked of the low-income population under study. Thus, employing both techniques provides a unique opportunity to provide reliability checks on data and to add to the scientific literature on interviewing techniques and survey methodology. The two interview strategies used to address this concern were a flexible-modality strategy (described in a following section) and the face-to-face component.

2.2   Summary of Changes to the STNAP Questionnaire

The only changes to the February 24, 2000 STNAP Survey Questionnaire was the addition of a brief series of questions designed to identify persons who may also have mental health or domestic violence service needs. The importance of including these items was based on (1) DMHSAS being not only the Single State Agency for substance abuse services, but also having responsibility for mental health and domestic violence services in Oklahoma; and (2) the integration and coordination of these three service areas being a high priority because substance abuse often occurs with mental illness (Regier, *et al.*, 1990) and domestic violence (Kantor and Straus, 1989), and exacerbates the problems of both. The added items are not analyzed for this report, but summaries of that information and its relation to substance abuse treatment needs among TANF recipients will be reported after project completion.

For the added mental health questions, two sets of items recommended by Ronald C. Kessler, professor and program director at Harvard University Medical School were used. Dr. Kessler and his colleagues reviewed and modified items from several scales for inclusion in the revised National Health Interview Survey. They used Item Response Theory to develop a short psychological distress scale

(6-10 items) with maximum information value that is reliable across subsamples of the U.S. population (Kessler and Mroczek, 1994). For domestic violence, they recommended the use of three items taken from the work of Straus (1990) that identify conflict tactics used by respondents. In addition, the Canadian survey on Violence Against Women (Canadian Centre for Justice Statistics, 1993) was mined for appropriate items.

3. RESEARCH DESIGN

3.1 Principal Investigators

Dr. Christine A. Johnson, Director of the Bureau for Social Research at the Oklahoma State University (OSU), was the principal investigator of the STNAP TANF telephone study. Dr. Johnson is a member of the American Association of Public Opinion Research and National Council on Family Relations. Prior to the start of Study #1, Dr. Johnson had conducted a study of TANF recipients for DHS and proposed a flexible-modality interview strategy. This approach was necessary due to the limited number of TANF families with telephones in their homes. Nearly all of those clients, however, had access to a telephone. This approach is described in detail in the data collection section below. Dr. Johnson obtained approval from the OSU Institutional Review Board to proceed with the telephone component of the study.

Dr. Kelly R. Damphousse, an Associate Professor of Sociology at the University of Oklahoma (OU), was the principal investigator of the STNAP TANF face-to-face study. Dr. Damphousse has over 10 years experience in research design, large-scale survey projects, longitudinal data collection, and complex data analysis. During that period, he has conducted a nationwide survey of police officers, and a statewide survey of incarcerated juvenile delinquents. He also coordinated the "Adaptations to Stress" intergenerational longitudinal study (funded by NIDA). Another Institutional Review Board approval was obtained from OU for the face-to-face component.

3.2 Sample Design and Selection

Among the Oklahoma adult population of 2.6 million adults, 7,901 (0.3%) were TANF recipients during January, 2001. These TANF recipients comprise the population addressed this study.

Although there were two types of data collection, telephone and face-to-face, the sample design and participant selection were the same for both types of data collection. Stratification was based on an urban/rural criterion with 52 percent of the TANF population in an urban setting and the remaining 48 percent in rural areas. Counties were grouped by urban or rural classification with Tulsa and Oklahoma Counties in the urban area and the remaining 75 counties in the rural area. Research staff from the Department of Human Services (DHS) supplied a

randomly generated list of 2,712 active TANF recipients from a list of active clients as of January, 2001 by county of residence.

3.3 Telephone Interview Data Collection and Response Rates

3.3.1 Data Collection

The telephone interviews were performed by the Oklahoma State University Bureau of Social Research (BSR) and supervised by Dr. Christine Johnson. The BSR is a research organization designed to provide resources and technical services for facilitating social and behavioral science studies by public and private organizations.

The BSR has 14 interviewer workstations with computers that are used for the Windows-based computer-assisted telephone interviewing (CATI) system. Features of the CATI system include:

Automatic error checking - response values are checked against the proper valid ranges as the interview progresses; interviewers are immediately prompted if the response value is not within the valid response range;

Item non-response - the CATI system requires the interviewer to enter a response to each question, thus minimizing the problem of item nonresponse; and

Response tracking - the CATI system records the telephone number and ID number for each interview, allowing quality control tracking.

Programmers have experience completing several applications for the CATI system. At the beginning of the project, the programmer and survey research specialist jointly reviewed the questionnaire, discussing potential problem areas and skip patterns. During programming, the programmer, survey staff and project manager were in constant contact to resolve problems and interpretations of the needs of the survey project. After testing by the programming staff, the program was tested by the survey research staff to ensure the language of the questionnaire was preserved, skip patterns were accurately replicated, and response data were accurately and reliably recorded.

3.3.2 Recruiting and Training

The university subcontractor employed student telephone interviewers at the Oklahoma State University campus. Potential interviewers were carefully screened, particularly for clarity of speech on the telephone and also for the ability to operate a mouse-driven CATI system.

A one-and-a-half-day training was held prior to data collection. During training, interviewers received instruction in the following topics:

- the purpose of the TANF survey including, why the survey was done and how the data were to be used
- survey design, including sample description
- commonly asked questions
- confidentiality
- dispositions
- survey instrument
- interview schedule description
- review question by question
- computer training.

Computer training included two practice runs, once with a male respondent and once with a female respondent; round robin practice; and practice in pairs.

3.3.3 Pre-notification Letter

Each person in the list of 2,712 TANF recipients was mailed a pre-notification letter requesting his or her participation in the study. The letter included the study dates, interviewing hours, assurances of confidentiality, and gave a toll free number for persons to call to complete the interview. The letter also indicated that participants who completed a survey would receive a $15.00 participation payment (see Appendix A for sample of letter).

A record was kept of all pre-notification letters that were returned to sender due to an incorrect or insufficient address. Calls were attempted on all of those records, provided they had a telephone number. Up to 12 call back attempts were made on each available record in the sample. After three weeks of interviewing, all records that were designated as "bad address" and were not eligible for further telephone call attempts were returned to DMHSAS to be used with the face-to-face component of the study.

3.3.4 Interviews

Interviewing began on January 16, 2001 and was completed on February 13, 2001. A total of 853 surveys were completed. Among those, 65 did not have a telephone in the home and called in to the 800 number to participate in the survey.

3.3.5 Response Rates

Response rates for the telephone survey were calculated using the Council of American Survey Research Organizations (CASRO) procedure (http://home.clara.net/sisa/resprhlp.htm). The CASRO response rate calculation

uses potential respondents who are eligible and completed; eligible and uncooperative; ineligible and uncooperative; and unknown (Tables 1, 2 and 3 for response rate calculations).

Table 1

Call Inventory For TANF Telephone Surveys	
Call Status	Number
Complete	853
Refusal	24
Call Back	153
Answering Machine	84
Language Barrier	7
Busy	11
No Answer	108
Call block/Call screen	20
Fax Dataline	5
Pager	9
Disconnected	475
Institution/Group Quarters	7
Not Qualified - Not Currently Living in Oklahoma	7
Total Attempted	1,763

Table 2

Response Rate Calculation	
Total Numbers Used:	1,763
- Not in service	475
- Unanswered	108
Equals: **Working Numbers**	1,180
- Institutions - Group Quarters	7
Equals: **Residential Numbers**	1,173
- Not currently living in Oklahoma	7
Equals: **Known Eligibles**	1,166
+Estimated Eligibles*	108
Equals: **Total Eligibles**	1,274
Completed Interviews:	853
/ Total Eligibles	1,274
Response Rate	66.95%

Table 3

Detail On Eligibles	
Known Eligibles:	1,166
- Refusal	24
- Unsuccessful Call Backs	153
- Answering Machine	84
- Language Barrier	7
- Busy	11
- Call block/Call screen	20
- Fax Dataline	5
- Pager	9
- Partial Complete	2
Complete	853
Estimated Eligibles*	108
Total Eligibles	1,274

Notes for Tables 1-3:

* If pursued long enough, some unanswered numbers will produce eligible household respondents. An estimate of these eligibles is defined as known eligibles divided by residential numbers multiplied by unanswered numbers. (1190/1197*108)

3.4   Face-to-Face Interview Data Collection and Response Rates

3.4.1 Data Collection

The face-to-face interviews were performed by the University of Oklahoma Sociology Department and supervised by Dr. Kelly Damphousse. Interviewing began on August 16, 2001 and ended on September 12, 2001. A total of 163 surveys were completed, 52 by appointment and 111 as cold calls. The survey responses were collected on a Computer Assisted Personal Interview (CAPI) system. Features of the CAPI system include:

Automatic error checking - response values are checked against the proper valid ranges as the interview progresses; interviewers are immediately prompted if the response value is not within the valid response range;

Item non-response - the CAPI system requires the interviewer to enter a response to each question, thus minimizing the problem of item nonresponse.

Since the face-to-face component used the same survey instrument as the telephone component, the program was provided by the BSR staff after the telephone portion of the study was completed. Minimal changes to the program

were required. The beginning and ending of the program had to be changed from telephone screening questions to face-to-face questions.

3.4.2 Interviewer Recruiting and Training

The university subcontractor employed one interviewer and one security person for the study. Attempts were made to hire more interviewers, but it was difficult to find interested applicants due to the nature of the survey.

An eight-hour training was held prior to data collection. During training, interviewers received instruction in the following topics:

- the purpose of the TANF survey, including why the survey was done and how the data were to be used
- survey design, including sample description
- commonly asked questions
- confidentiality
- dispositions
- survey instrument
    interview schedule description
    review question by question
- computer training with 10 practice runs.

The interviewer and security person were provided with OU t-shirts and badges with their names and pictures.

3.4.3 Pre-notification Letter

Each person in the sample of 741 was mailed a pre-notification letter requesting his or her participation in the study. The letter included a pre-addressed, stamped postcard to be returned to OU if the recipient was interested in participating in the survey with a date to circle for the best time for the interview. The letter also indicated that participants who completed a survey would receive a $15.00 participation payment (see Appendix A for sample of letter).

Of the 741 pre-notification letters mailed to potential respondents, 52 post cards were returned, indicating an interest in participating, and over 146 letters returned indicating a wrong address. The small number of responses prompted a request to the Department of Human Services for a new list of addresses for the respondents. Those with telephone numbers were called to set up appointments and the remainder were cold-calls.

3.4.4 Response Rates

Interviewers approached 368 TANF recipient homes for interviews. Among those, 196 did not respond when the interviewers knocked at the door. To

encourage the participation of the resident, a card was left on the door identifying the survey and giving a number to call if the recipient was interested in participating. There were no responses to the cards. If all of these cases were counted as non-responses, the response rate would be very low (44%). However, it is unknown what number of these homes were vacant or no longer housed a TANF recipient. Without that knowledge, it is not possible to estimate the number of eligible respondents. Therefore, the response rate of 94.77 percent, shown in Table 4 was not calculated with the non-responses in the denominator.

Table 4

Response Rates For TANF Face-To-Face Surveys	
Contact Status	Number
Complete	163
Refusal	4
Equipment Failure	5
Total Attempted	172
Response Rate	94.77%

4.   DEFINITIONS OF TERMS AND MEASURES

This survey included items on the core set of drugs included in the STNAP Survey Questionnaire. The core drugs were tobacco, alcohol, marijuana, powder cocaine, crack cocaine, hallucinogens, heroin, pain relievers, tranquilizers, sedatives, stimulants and methamphetamine.

4.1   Tobacco, Alcohol and Illicit Drugs. Screening for tobacco use was based on cigarette smoking. Cigar or pipe smoking, chewing tobacco and snuff use were not included in the prevalence estimates.

Screening for alcohol use was based on drinking behaviors. A drink is defined as "a regular size bottle of beer, a wine cooler or a glass of wine, champagne, or sherry, a shot of liquor or a mixed drink or cocktail" (STNAP Survey Questionnaire). Any respondents identified by the screen were then asked in detail about alcohol use (see pages A42-A43 of the STNAP Survey Questionnaire in Appendix B).

Primarily, illicit drug use was defined as non-medical use of any of the 10 drugs studied (marijuana, powder cocaine, crack cocaine, hallucinogens, heroin, pain relievers, tranquilizers, sedatives, stimulants and methamphetamine). Any respondent who answered "yes" to use of an illicit drug was asked in detail about using that drug.

4.2   Substance Abuse and Dependence.   The DSM-IV defines abuse as clinically significant impairment or distress resulting from a maladaptive pattern of substance use as manifested by any one or more of the four abuse criteria occurring at any time in the same 12 month period (see Table 5).

Table 5

	Criteria For Substance Abuse
A.1.	Recurrent substance use resulting in a failure to fulfill major role obligation at work, school or home (e.g., repeated absences or poor work performance related to substance use; substance-related absences, suspensions, or expulsions from school; neglect of children or household).
A.2.	Recurrent substance use in situation in which it is physically hazardous (e.g., driving an automobile or operating a machine when impaired by substance use).
A.3.	Recurrent substance-related legal problems (e.g., arrests for substance-related disorderly conduct).
A.4.	Continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance (e.g., arguments with spouse about consequences of intoxication, physical fights).
B.	Has never met the criteria for Substance Dependence for this substance.

Criteria for substance dependence were derived from the *Diagnostic and Statistical Manual of Mental Disorders*, 4th revised edition (DSM-IV; American Psychiatric Association, 1994). On page 181, the DSM-IV defines dependence as a maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three (or more) of the criteria listed in Table 6 occurring at any time in the same 12 month period.

Table 6

	Criteria For Substance Dependence
1.	Tolerance, as defined by either of the following: (a) A need for markedly increased amounts of the substance to achieve intoxication or desired effect (b) Markedly diminished effect with continued use of the same amount of the substance.
2.	Withdrawal, as manifested by either of the following: (a) The characteristic withdrawal syndrome for the substance (b) The same (or closely related) substance is taken to relieve or avoid withdrawal symptoms
3.	The substance is often taken in larger amounts or over a longer period than was intended
4.	There is a persistent desire or unsuccessful efforts to cut down or control substance use

Criteria For Substance Dependence	
5.	A great deal of time is spent in activities necessary to obtain the substance, use the substance, or recover from its effects
6.	Important social, occupational, or recreational activities are given up or reduced because of substance use
7.	The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance

4.3   Need for Substance Abuse Treatment. Need for treatment is defined in terms of DSM-IV. Persons are in need of treatment if they meet accepted criteria for alcohol or drug abuse or dependence at any time during the year prior to the time a treatment need estimate for the area is produced (STNAP Core Protocol, 2001).

5.   DATA PROCESSING AND ANALYSIS

Weights were assigned according to the population-to-sample-size ratio in the particular stratum occupied by an observation. Strata were defined by the 77 counties in Oklahoma. The 77 different weights thus assigned ranged from 0 to 55. The median weight was 4.27, the average was 6.05, and the standard deviation was 7.0.

Subsequent to review by the project manager, data entered by the CATI system (telephone surveys) were transposed into a rectangular format for analysis with SAS statistical software application for the personal computer. From the OSU-BSR staff, a codebook was developed indicating valid response ranges for each variable and the name used to represent each variable in the data file. The code book also contains documentation regarding response rates and interviewer training.

Data entered by the CAPI system (face-to-face surveys) were transposed into a rectangular format for analysis with SAS statistical software and provided to the project manager. A codebook was provided by the OU staff which contained the name used to represent each variable and frequencies of each variable.

5.1   Data Quality

The 853 completed telephone surveys were supplied to DMHSAS on a diskette. The final dataset had been pre-cleaned and screened.   The dataset was evaluated and tested a second time at DMHSAS and no data quality issues were observed. Each variable name correctly corresponded to a question number and the values reported matched the possible responses.

The 163 completed face-to-face surveys were supplied to DMHSAS on a compact disk. The data were sent in two files, a Microsoft Word document containing responses to the open-ended questions and a tab-delimited file containing the remaining responses. The final data had been pre-cleaned and screened and each variable name corresponded to the correct question number and the values matched the possible responses.

A dataset containing the combined responses, telephone and face-to-face, was used for the following analyses. For ease in comparing the responses based on survey method, the responses were flagged for the type of survey method.

6. RESULTS

Table 7 contains demographic categories of the respondents to the TANF survey. In addition to the number of respondents in each category, the weighted and unweighted proportions are included to demonstrate the similarity of the sample to the population.

Table 7

Demographic Description of Respondents							
	Telephone		Face-to-Face		All Respondents		
	N	Unweighted %	N	Unweighted %	N	Unweighted %	Weighted %
Gender							
Male	55	6.45	16	9.82	71	6.99	6.31
Female	798	93.55	147	90.18	945	93.01	93.69
Age Category							
18 – 21	133	15.59	35	21.47	168	15.59	17.74
22 – 30	318	37.28	57	34.97	375	27.28	37.64
31 – 40	260	30.48	32	19.63	292	30.48	27.52
41 – 50	107	12.54	23	14.11	130	12.54	12.69
50 +	35	4.10	16	9.82	51	4.10	4.42
Race							
White	408	49.22	63	41.18	471	47.96	41.90
Black or African American	235	28.35	69	45.10	304	30.96	36.18
American Indian or Alaska Native	92	11.10	19	12.42	111	11.30	9.94
Other	1	0.12	1	0.65	4	0.51	0.49
Two or More Races	90	10.86	1	0.65	91	9.27	8.22
Hispanic, Latino(a), or Spanish Origin or Descent	53	6.21	8	4.91	61	6.00	5.84
Number in Household (including Respondent)							
1	2	0.23	10	6.13	12	1.18	1.24
2	181	21.22	38	23.31	219	21.56	20.72
3	252	29.54	43	26.38	295	29.04	29.20
4	190	22.27	32	19.63	222	21.85	22.44

Demographic Description of Respondents						
	Telephone		Face-to-Face		All Respondents	
	N	Unweighted %	N	Unweighted %	N	Unweighted %	Weighted %
5	128	15.01	22	13.50	150	14.76	14.60
6	41	4.81	8	4.91	49	4.82	4.50
7 or More	59	6.92	10	6.13	69	6.79	7.30
Work Status						
Full time	141	16.55	42	25.77	183	18.03	19.36
Part time	113	13.26	27	16.56	140	13.79	14.21
Employed - out on leave	60	7.04	1	0.61	61	6.01	4.94
Seasonal Work	5	0.59	0	0.00	5	0.49	0.44
Unemployed	258	30.28	48	29.45	306	30.15	31.01
Full-time Homemaker	42	4.93	8	4.91	50	4.93	4.89
Student	181	21.24	12	7.36	193	19.01	18.37
Retired	2	0.23	0	0.00	2	0.20	0.27
Disabled for Work	50	5.87	24	14.72	74	7.29	6.24
Marital Status						
Married	87	10.21	19	11.66	106	10.44	9.18
Living as Married	37	4.34	14	8.59	51	5.02	4.80
Widowed	8	0.94	8	4.91	16	1.58	1.80
Divorced/Seperated	381	44.72	46	28.22	427	42.07	39.79
Never Married	339	39.79	75	46.01	414	40.79	44.16
Education						
None	1	0.12	0	0.00	1	0.10	0.03
First – 8th Grade	19	2.23	4	2.45	23	2.27	1.86
Some High School	185	21.71	42	25.77	227	22.36	23.18
High School Graduate or Equivalent	306	35.92	64	39.26	370	36.45	36.65
Some College, No Degree	275	32.28	33	20.25	308	30.34	30.11
Associate Degree	52	6.10	17	10.43	69	6.80	6.26
Four Years of College (Graduate)	14	1.64	2	1.23	16	1.58	1.62
Advanced Degree	0	0.00	0	0.00	0	0.00	0.00
Regional Advisory Board Area						
Central	89	10.43	4	2.45	93	9.15	5.93
East Central	87	10.20	11	6.75	98	9.65	5.54
Northeast	61	7.15	14	8.59	75	7.38	5.50
Northwest	37	4.34	0	0.00	37	3.64	1.80
Oklahoma City Metro	261	30.60	55	33.74	316	31.10	46.46
Southeast	129	15.12	29	17.79	158	15.55	12.27
Southwest	142	16.65	19	11.66	161	15.85	13.54
Tulsa	47	5.51	31	19.02	78	7.68	8.96

While males comprised a small percent of the sample, the percent of males was lower in the telephone survey responses than in the face-to-face responses

(6.5% vs. 9.8%, respectively). The overall percentage of male respondents was 7 percent, weighted to represent the 6.3 percent of males in the TANF population.

The age breakouts were very similar for both methods, with the exception of the 50 years or older category (telephone, 4.1%, face-to-face, 9.8%). Overall, 22- to 30-year-olds were the largest age group (37.6%), followed by 31- to 40-year-olds (27.5%), 18- to 21-year-olds (17.7%), 41- to 50-year-olds (12.7%) and 50 years or older (4.4%).

Race did not affect the chance of having a phone when the sample was pulled, with the exception of African Americans. For this group, 28.4 percent were surveyed by telephone and 45.1 percent were surveyed face-to-face. There were much higher rates of minorities in the TANF population than the general population 18 years or older. African Americans comprised 36.2 percent of the population and only 6.9 percent of the general population. Native Americans were 9.9 percent of the population and 6.8 percent of the general population. Clients reporting two or more races made up 8.2 percent of the population and 3.6 percent of the general population. While there were fewer Whites in the population than in the general population, they still comprised the largest racial group in both (41.9% and 79.2%, respectively).

Half of the population had a household size of two or three persons (21.2% and 28.9%, respectively). Over a quarter of the population had five or more in the household (5 persons, 14.8%; 6 persons, 4.9%; and 7 or more persons, 6.8%). The distribution of household size did not vary much by survey method.

When work status was examined, 16.6 percent of the telephone respondents worked full-time compared to 25.8 percent of the face-to-face respondents. Telephone respondents were also less likely to be disabled (5.9% vs. 14.7%, respectively), but were more likely to be in school (21.2% vs. 7.4%, respectively). For the total sample, nearly a third (31%) were unemployed or not seeking employment (homemaker, student, retired, or disabled) (29.8%), and over a third (39%) had some type of employment (full-time, part-time, on leave, or seasonal work).

Nearly half of the TANF population had never been married (44.2%) and another 42 percent were widowed (1.8%) or divorced or separated (39.8%).

Over a third of the sample had a high school education (36.7%) and another 38 percent had at least some college. Educational attainment did not vary much by survey method with one exception. Telephone respondents were more likely to have some college, but no degree (31.6%) when compared to face-to-face respondents (20.3%), and less likely to have an associate degree (6.1% vs. 10.4%, respectively).

Over half of TANF recipients live in the two urban RABs in the State (Oklahoma City Metro RAB, 46.5%; Tulsa RAB, 9%), compared to only two thirds of the general population living in the two urban areas. Although the rate of telephone and face-to-face respondents differed in the sub-state areas in which they resided, it did not appear to be based on urbanicity or economic conditions of the sub-state areas.

6.1   Prevalence of Tobacco, Alcohol and Other Drug Use

The prevalence tables (Tables 8 – 10) contain estimates of the number of users, the percent of use in the population, the standard deviations (or standard errors for rates) and confidence intervals around estimates among TANF recipients in Oklahoma by sub-state regions, known as Regional Advisory Board (RAB) areas (refer to Figure 1 Map of Regional Advisory Board Sub-State Planning Areas, page 7). The estimates were obtained by weighting each observation according to the Oklahoma TANF population proportion represented in each RAB. Each table contains the standard deviation for the population estimates and standard error for the rate estimates, both designated by *"sd."* The lower and upper limits of the 95 percent confidence intervals were calculated around the point estimates and are designated as "*lower ci*" and "*upper ci,*" respectively.

Estimates of Prevalence of Tobacco Use. Four-fifths of the respondents (80.4%) reported smoking tobacco sometime during their lives (Table 8). Three fifths (62.8%) had smoked in the last year, and over half (56.1%) had used tobacco in the last 30 days. The Oklahoma City RAB had the lowest prevalence of tobacco use for all three time periods, while the Central RAB, which abuts Oklahoma City, had the highest tobacco use rate for all three time periods. The range of tobacco use in the last 30 days was 48.9 percent in Oklahoma City to 72.5 percent in the Central RAB.

Estimates of Prevalence of Alcohol Use. Statewide, 91.52 percent of the respondents had used alcohol in their lifetimes (Table 9). Over half (59.3%) had used in the last year and a third (33.1%) had used in the last month. These rates were very similar to those of the general population (lifetime, 88.9%; last month, 36.4%). (The "last 18 months" time period was asked in the general household survey, as opposed to the "last 12 months" asked in the TANF survey, so the middle time periods were not compared.)

The Northeast sub-state region reported the highest lifetime use (98.2%) while the Central sub-state region had the highest rate of use in the last year (67.7%) and the last 30 days (44.1%). The Oklahoma City RAB had the lowest lifetime rate of alcohol use (88.4%) while the East Central had the lowest rate of use in the last year (49.5%) and the last month (23.8%).

Estimates of Prevalence of Illicit Drug Use. Nearly two-thirds of the TANF recipients (63.1%) that responded to the survey reported using illicit drugs in their

lifetime (Table 10). This is almost twice as many as had used illicit drugs in the general population (33.4%). One out of five (19.5%) reported having used in the last year. The percentage of those who had used illicit drugs in the last 30 days was four times as high among TANF respondents (8.8%) as it was in the general population (2.1%).

The Northwest RAB had the highest lifetime use of illicit drugs (83.5%) and use for the last 12 months (26.9%) while the Northeast RAB was highest in the last 30 days (14.8%). The Southeast RAB had the lowest lifetime rate (58.8%), use in the last year (11.7%) and the last month (4%).

When respondents who were lifetime illicit drug users were asked what types of illicit drugs they had used, nearly all of them (94.4%) reported using marijuana in their lifetime (Table 11). Powder cocaine was the next most used drug at 58.7 percent, followed by methamphetamine (48.7%), hallucinogens (42.9%) and pain relievers (42.3%). The three most prevalent drugs in the last 12 months were marijuana (45.1%), methamphetamine (20.9%) and pain relievers (16.3%). For last month use, the rate of marijuana use was 24 percent, pain reliever use was 6.2 percent and methamphetamine use was 5.2 percent.

The use and abuse of tobacco, alcohol and other drugs by pregnant women is recognized as an important health issue in the United States. Cigarette smoking during pregnancy has been associated with low birth weight, preterm birth, and infant morbidity and mortality (CDC, 1995). Each year an estimated 4,000 to 12,000 infants are born with Fetal Alcohol Syndrome (FAS) and thousands more are born with Fetal Alcohol Effects (FAE) (SAMHSA, 1993). Maternal cocaine use during pregnancy can increase the risk of miscarriage or premature delivery (NIDA, 1994). Other complications include obstetrical complications, low birth weight, abnormal neonatal behavior, and cerebral infarction (SAMHSA, 1992). The length of stay in hospitals is three times longer for newborns with perinatal alcohol and other drug exposure compared to infants born to drug-free mothers (National Center on Addiction and Substance Use, 1993). Because of these potential problems, drug use of respondents who were pregnant at the time of the survey was studied (Table 12). As would be expected, pregnant respondents reported lifetime prevalence rates for tobacco, alcohol and illicit drug use that were similar to rates in the total sample. Past year use of alcohol and tobacco were also comparable; however, illicit drug use was substantially lower for pregnant women than for the rest of the sample. While past year use may or may not have overlapped with their pregnancies, 12.9 percent reported having used marijuana, 1.2 percent reported methamphetamine use and 1 percent reported using pain relievers. While use in the past month dropped considerably from previous time periods, 39.4 percent of the pregnant respondents reported smoking cigarettes, 10.7 percent drank alcohol and 3.1 percent used marijuana.

In addition to substance use during pregnancy, another question posed by the research staff was use following the birth of a child. Substance use of females

who had given birth in the past year is displayed in Table 13. In the past year, marijuana was used at a higher rate among women who had given birth in the last year than among pregnant women (15.6% vs. 12.9%, respectively). Pain reliever use was twice that of pregnant women (3.1% vs. 1%, respectively), but methamphetamine use was lower (0.9% vs. 1%, respectively). For past month use, marijuana use by women who had given birth in the last year was twice that of pregnant women (7.1% vs. 3.1%, respectively) and a small number of women reported use of pain relievers (0.4%) and methamphetamine (0.2%).

Prevalence of Use by Survey Method. Prevalence of use was compared among telephone interview respondents and face-to-face respondents to determine whether there was a difference in the rate of use and treatment need correlated with the respondent having access to a telephone. The rate of tobacco use was very comparable for all three time periods with the greatest difference being reported in the last 30 days (face-to-face, 60.1%; telephone, 57.8%). Lifetime use of alcohol was similar, however, face-to-face respondents reported a higher use rate in the last year than telephone respondents (64.4%, 56.9%, respectively) and the difference was statistically significant for use in the last 30 days (39.9%, 31%, respectively). For illicit drug use, lifetime use was again equal between the two methods; however, face-to-face respondents reported significantly higher rates of use for both the last year (25.8%, 18.1%, respectively) and the last month (14.1%, 6.5%, respectively).

Table 8

Prevalence of Tobacco Use Among TANF Recipients in Oklahoma

Regional Advisory Board Area	Population Estimates			Rate		
	Lifetime	Last 12 Months	Last 30 Days	Lifetime	Last 12 Months	Last 30 Days
Central	422	366	338	90.56%	78.49%	72.52%
*sd	15	21	23	3.24%	4.54%	4.91%
lower ci	392	324	292	84.13%	69.47%	62.75%
upper ci	452	408	383	97.00%	87.52%	82.28%
East Central	373	305	297	85.83%	70.10%	68.37%
*sd	19	22	22	4.36%	5.13%	5.14%
lower ci	336	261	253	77.16%	59.92%	58.16%
upper ci	411	349	342	94.49%	80.29%	78.59%
Northeast	371	318	270	85.97%	73.63%	62.41%
*sd	17	21	24	3.90%	4.83%	5.55%
lower ci	338	276	222	78.17%	63.97%	51.31%
upper ci	405	360	318	93.76%	83.28%	73.50%
Northwest	112	100	83	79.11%	71.05%	59.12%
*sd	13	14	13	8.97%	9.58%	9.52%
lower ci	86	73	56	60.74%	51.43%	39.63%
upper ci	137	128	111	97.48%	90.67%	78.62%
OKC	2,761	2,053	1,785	75.68%	56.25%	48.92%
*sd	90	103	104	2.47%	2.83%	2.84%
lower ci	2,584	1,849	1,581	70.82%	50.68%	43.33%
upper ci	2,939	2,256	1,989	80.53%	61.82%	54.52%
Southeast	816	639	582	84.66%	66.30%	60.37%
*sd	37	46	45	3.85%	4.78%	4.72%
lower ci	742	548	492	77.05%	56.85%	51.04%
upper ci	889	730	672	92.27%	75.75%	69.69%
Southwest	924	708	635	86.93%	66.58%	59.75%
*sd	29	42	43	2.77%	3.93%	4.03%
lower ci	866	625	550	81.46%	58.81%	51.78%
upper ci	982	790	720	92.40%	74.35%	67.72%
Tulsa	533	442	415	75.64%	62.82%	58.97%
*sd	34	39	39	4.89%	5.51%	5.61%
lower ci	464	365	337	65.90%	51.85%	47.81%
upper ci	601	519	494	85.38%	73.79%	70.14%
Statewide	6,312	4,930	4,405	80.37%	62.78%	56.10%
*sd	112	133	134	1.43%	1.69%	1.71%
lower ci	6,092	4,670	4,142	77.57%	59.46%	52.74%
upper ci	6,532	5,191	4,669	83.17%	66.10%	59.45%

Table 9

Prevalence of Alcohol Use Among TANF Recipients in Oklahoma						
Regional Advisory Board Area	Population Estimates			Rate		
	Lifetime	Last 12 Months	Last 30 Days	Lifetime	Last 12 Months	Last 30 Days
Central	438	315	205	93.99%	67.72%	44.06%
sd	12	23	25	2.63%	4.95%	5.26%
lower ci	414	270	157	88.77%	57.88%	33.61%
upper ci	462	361	254	99.20%	77.56%	54.51%
East Central	410	215	105	94.31%	49.51%	24.13%
sd	9	26	23	2.05%	5.96%	5.33%
lower ci	393	164	59	90.24%	37.66%	13.55%
upper ci	428	267	151	98.39%	61.35%	34.71%
Northeast	424	286	161	98.17%	66.12%	37.33%
sd	6	24	22	1.29%	5.61%	5.06%
lower ci	413	237	118	95.59%	54.92%	27.23%
upper ci	435	334	205	100.00%	77.32%	47.43%
Northwest	131	77	53	92.69%	54.65%	37.66%
sd	6	16	16	4.60%	11.48%	11.45%
lower ci	117	44	20	83.27%	31.13%	14.21%
upper ci	144	110	86	100.00%	78.17%	61.11%
OKC	3,224	2,104	1,229	88.36%	57.65%	33.69%
sd	67	103	99	1.85%	2.83%	2.70%
lower ci	3,091	1,900	1,035	84.72%	52.07%	28.38%
upper ci	3,357	2,307	1,423	91.99%	63.22%	39.00%
Southeast	903	519	231	93.77%	53.82%	23.99%
sd	20	46	44	2.12%	4.80%	4.57%
lower ci	863	427	144	89.58%	44.33%	14.95%
upper ci	944	610	318	97.96%	63.30%	33.03%
Southwest	1,018	719	390	95.72%	67.68%	36.67%
sd	18	43	48	1.66%	4.03%	4.48%
lower ci	983	635	296	92.45%	59.72%	27.80%
upper ci	1,052	804	484	99.00%	75.65%	45.53%
Tulsa	641	424	226	91.03%	60.26%	32.05%
sd	23	39	37	3.26%	5.58%	5.32%
lower ci	595	346	151	84.54%	49.15%	21.46%
upper ci	686	502	300	97.51%	71.36%	42.64%
Statewide	7,189	4,659	2,601	91.54%	59.33%	33.11%
sd	78	135	131	1.00%	1.72%	1.67%
lower ci	7,036	4,394	2,343	89.59%	55.96%	29.83%
upper ci	7,342	4,924	2,858	93.49%	62.70%	36.39%

Table 10

Prevalence of Illicit Drug Use Among TANF Recipients in Oklahoma

Regional Advisory Board Area	Population Estimates			Rate		
	Lifetime	Last 12 Months	Last 30 Days	Lifetime	Last 12 Months	Last 30 Days
Central	379	121	53	81.44%	25.90%	11.45%
sd	20	22	16	4.27%	4.71%	3.44%
lower ci	340	77	22	72.95%	16.53%	4.62%
upper ci	419	164	85	89.93%	35.26%	18.29%
East Central	309	81	25	71.00%	18.52%	5.69%
sd	18	20	9	4.18%	4.53%	2.05%
lower ci	273	41	7	62.69%	9.51%	1.61%
upper ci	345	120	42	79.30%	27.52%	9.76%
Northeast	304	112	64	70.33%	25.94%	14.79%
sd	23	19	9	5.30%	4.30%	2.06%
lower ci	258	75	46	59.75%	17.35%	10.68%
upper ci	350	149	82	80.91%	34.53%	18.90%
Northwest	118	38	15	83.47%	26.89%	10.96%
sd	14	14	12	9.70%	9.74%	8.86%
lower ci	90	10	0	63.60%	6.94%	0.00%
upper ci	146	66	41	100.00%	46.84%	29.10%
OKC	2,183	673	337	59.83%	18.45%	9.23%
sd	102	81	60	2.80%	2.22%	1.66%
lower ci	1,982	514	218	54.31%	14.08%	5.97%
upper ci	2,384	833	456	65.34%	22.82%	12.49%
Southeast	566	113	38	58.78%	11.69%	3.95%
sd	44	31	15	4.59%	3.19%	1.55%
lower ci	479	52	9	49.70%	5.39%	0.89%
upper ci	654	173	68	67.86%	18.00%	7.01%
Southwest	645	211	83	60.67%	19.85%	7.82%
sd	44	39	25	4.17%	3.66%	2.34%
lower ci	557	134	34	52.42%	12.62%	3.20%
upper ci	733	288	132	68.92%	27.08%	12.45%
Tulsa	451	181	72	64.10%	25.64%	10.26%
sd	38	35	24	5.47%	4.98%	3.46%
lower ci	375	111	24	53.22%	15.73%	3.37%
upper ci	528	250	121	74.99%	35.55%	17.14%
Statewide	4,955	1,529	688	63.10%	19.46%	8.75%
sd	132	108	75	1.68%	1.37%	0.96%
lower ci	4,697	1,317	540	59.81%	16.77%	6.87%
upper ci	5,213	1,741	835	66.39%	22.16%	10.63%

Table 11

Type of Drug Use Among Illicit Drug Users Receiving TANF Benefits By Time						
	Population Estimates			Rate		
Drug Type	Lifetime	Last 12 Months	Last 30 Days	Lifetime	Last 12 Months	Last 30 Days
Marijuana	1,980	945	505	94.4%	45.06%	24.08%
Powder Cocaine	1,231	132	17	58.71%	6.3%	0.82%
Crack Cocaine	820	147	33	39.1%	7.02%	1.59%
Hallucinogens	900	64	0	42.89%	3.04%	0.00%
Heroin	243	0	0	11.6%	0.00%	0.00%
Pain Relievers	888	341	129	42.31%	16.26%	6.17%
Tranquilizers	456	90	18	21.75%	4.27%	0.85%
Sedatives	272	99	26	12.95%	4.72%	1.24%
Stimulants	558	205	28	26.58%	9.77%	1.33%
Methamphetamine	1,021	438	109	48.67%	20.89%	5.18%

Note: Respondent may choose more than one type of drug.

Table 12

Prevalence Among Women Receiving TANF and Pregnant at the Time of the Interview						
Weighted N = 672						
	Lifetime Use		Last Year Use		Last Month Use	
	Estimate	Percent	Estimate	Percent	Estimate	Percent
Tobacco and Alcohol						
Tobacco	298	76.75	236	60.84	152.86	39.36
Alcohol	364	93.63	217	55.89	41.69	10.74
Illicit Drugs						
Marijuana	237	61.05	50	12.96	12.00	3.09
Powder Cocaine	41	10.44	1	0.26	0	0.00
Crack Cocaine	21	5.52	0	0.00	0	0.00
Hallucinogens	28	7.22	0	0.00	0	0.00
Heroin	9	2.42	0	0.00	0	0.00
Pain Relievers	19	4.92	4	1.03	0	0.00
Tranquilizers	16	4.07	0	0.00	0	0.00
Sedatives	0	0.00	0	0.00	0	0.00
Stimulants	15	3.96	0	0.00	0	0.00
Methamphetamine	37	9.41	4	1.15	0	0.00

Table 13

Prevalence Among Women Receiving TANF Who Have Given Birth in the Past Year

Weighted N = 2,016

	Lifetime Use		Last Year Use		Last Month Use	
	Estimate	Rate (%)	Estimate	Rate (%)	Estimate	Rate (%)
Tobacco and Alcohol						
Tobacco	1,436	71.24	1,094	54.29	966	47.93
Alcohol	1,737	86.19	1,042	51.69	513	25.44
Illicit Drugs						
Marijuana	1,105	54.82	314	15.60	144	7.13
Powder Cocaine	175	8.68	12	0.61	0	0.00
Crack Cocaine	103	5.11	12	0.61	0	0.00
Hallucinogens	144	7.13	28	1.40	0	0.00
Heroin	15	0.73	0	0.00	0	0.00
Pain Relievers	200	9.91	61	3.05	8	0.40
Tranquilizers	50	2.46	23	1.13	0	0.00
Sedatives	35	1.75	7	0.34	0	0.00
Stimulants	63	3.11	4	0.22	0	0.00
Methamphetamine	162	8.02	18	0.91	3	0.17

Table 14

Prevalence of Use by Survey Methodology

Unweighted

Type of Use		Telephone		Face-to-Face		Chi-Square	P-Value
		N	%	N	%		
Tobacco	Lifetime Use	707	82.88	135	82.82	0.0004	0.9847
	Last Year Use	558	65.42	107	65.64	0.0031	0.9553
	Last Month Use	493	57.80	98	60.12	0.3045	0.5810
Alcohol	Lifetime Use	786	92.15	149	91.41	0.1006	0.7511
	Last Year Use	485	56.86	105	64.42	3.2114	0.0731
	Last Month Use	264	30.95	65	39.88	4.9815	0.0256
Illicit Drugs	Lifetime Use	558	65.42	106	65.03	0.0090	0.9245
	Last Year Use	154	18.05	42	25.77	5.2288	0.0222
	Last Month Use	55	6.45	23	14.11	11.3367	0.0008

6.2   Need for Treatment of Alcohol and Illicit Drug Use

Overall Prevalence of Treatment Need. As displayed in Table 15, statewide, 15.4 percent of the survey respondents needed alcohol treatment and 16 percent needed illicit drug treatment, for an overall treatment need of 24.5 percent. Treatment need ranged from 18.7 percent in the Southeast sub-state region to 37.6 percent in the Northwest sub-state region.

Table 16 points out that for illicit drug use, respondents in need of treatment used the same types of drugs as the total sample but had a higher rate of use. Marijuana is the most prevalent drug for lifetime (94.2%), last year (45.2%) and last month (25.1%) use. Other drugs prevalent in the two most recent time periods examined were pain relievers (last year, 16%; last month, 6.6%) and methamphetamine (last year, 20.2%; last month, 5.1%).

For the respondents in need of treatment, Table 17 displays the levels of care needed at the initiation of treatment by RAB. Level of care was based on the algorithm developed by John French (2001). It is important to note that level of care is determined by the most intensive level starting with detox, followed by residential and outpatient treatment. Only the initial level of care is determined, therefore, respondents who require detox services will also require other treatment (i.e., residential or outpatient treatment) but are only counted once, in the detox category. For example, the Northeast and Northwest RABs do not show any need for residential treatment and little outpatient need because the majority of respondents in these areas need to begin services at the detox level. This table only represents the number of respondents beginning treatment at each level. For continuity of care, it is estimated that all respondents needing detox and/or residential treatment will require outpatient treatment.

The need for detox ranged from 18.8 percent in the Southwest RAB to 90.6 percent in the Northwest RAB. The percent of respondents needing residential treatment as their first level of care ranged from 0 in the two northern RABS to 72 percent in the Southeast.   The Southwest RAB had the highest rate of respondents needing only outpatient treatment (62.8%) and the Southeast had the lowest rate (4%).

Just as it was assumed in the discussion above, that all those receiving detox or residential treatment would need outpatient follow-up care, residential treatment need can be estimated beyond what is shown in Table 17. According to the algorithm used to determine which level of care is needed, the final determination for residential or outpatient treatment is based on whether the respondent had prior treatment. Among the 445 in need of detox services, 259 had received prior treatment and would therefore need residential treatment following detoxification.

Table 18 contains the estimated number of people who would need residential treatment following detox by Regional Advisory Board area.

Table 15
Need for Treatment Among TANF Recipients in Oklahoma by Regional Advisory Board

Regional Advisory Board Area	Population per Regional Advisory Board Area	In Need of Treatment for Alcohol (with or without Drugs)		In Need of Treatment for Illicit Drugs (with or without Alcohol)		In Need of Treatment for Alcohol and/or Illicit Drugs	
		Population Estimates	Percent	Population Estimates	Percent	Population Estimates	Percent
Central	566	119	25.47%	106	22.78%	167	35.78%
*sd		21	4.42%	21	4.50%	24	5.08%
Lower ci		78	16.68%	64	13.83%	120	25.69%
Upper ci		160	34.25%	148	31.73%	214	45.86%
East Central	435	88	20.29%	52	12.05%	109	25.17%
*sd		21	4.77%	13	3.06%	22	5.02%
Lower ci		47	10.81%	26	5.97%	66	15.19%
Upper ci		129	29.77%	79	18.13%	153	35.15%
Northeast	432	47	10.92%	112	25.90%	141	32.55%
*sd		15	3.50%	18	4.23%	20	4.73%
Lower ci		17	3.92%	75	17.45%	100	23.10%
Upper ci		77	17.92%	148	34.35%	181	42.00%
Northwest	147	32	22.56%	38	27.15%	53	37.61%
*sd		14	10.13%	15	10.58%	16	11.48%
Lower ci		3	1.81%	8	5.48%	20	14.10%
Upper ci		61	43.31%	69	48.81%	86	61.12%
OKC	3,649	480	13.17%	451	12.36%	718	19.68%
*sd		70	1.93%	68	1.87%	83	2.26%
Lower ci		342	9.38%	317	8.68%	556	15.23%
Upper ci		619	16.96%	585	16.03%	881	24.14%
Southeast	904	91	9.50%	124	12.84%	180	18.72%
*sd		27	2.78%	33	3.48%	37	3.79%
Lower ci		39	4.00%	58	5.97%	108	11.22%
Upper ci		144	14.99%	190	19.72%	253	26.22%
Southwest	1,064	208	19.52%	218	20.55%	336	31.65%
*sd		37	3.50%	37	3.44%	42	3.93%
Lower ci		134	12.61%	146	13.75%	254	23.88%
Upper ci		281	26.43%	291	27.35%	419	39.43%
Tulsa	704	144	20.51%	153	21.79%	217	30.77%
*sd		32	4.60%	33	4.70%	37	5.26%
Lower ci		80	11.35%	87	12.43%	143	20.30%
Upper ci		209	29.68%	219	31.16%	290	41.24%
Statewide	7,901	1,210	15.40%	1,255	15.98%	1,921	24.47%
*sd		97	1.23%	97	1.23%	114	1.45%
Lower ci		1,020	12.98%	1,065	13.56%	1,698	21.62%
Upper ci		1,400	17.82%	1,445	18.40%	2,145	27.32%

Table 16

Type of Drug Use Among TANF Recipients in Need of Treatment for Illicit Drugs						
Drug Type	Population Estimates			Rate		
	Lifetime	Last 12 Months	Last 30 Days	Lifetime	Last 12 Months	Last 30 Days
Marijuana	1,183	567	316	94.23%	45.15%	25.14%
Powder Cocaine	718	70	12	57.23%	5.61%	0.98%
Crack Cocaine	497	97	22	39.56%	7.69%	1.73%
Hallucinogens	524	34	0	41.79%	2.74%	0.00%
Heroin	142	0	0	11.31%	0.00%	0.00%
Pain Relievers	525	201	82	41.8%	16.03%	6.57%
Tranquilizers	271	49	8	21.57%	3.94%	0.62%
Sedatives	170	58	19	13.57%	4.58%	1.54%
Stimulants	311	110	18	24.74%	8.78%	1.43%
Methamphetamines	597	254	64	47.54%	20.24%	5.12%

Note: Respondants may use more than one type of drug.

Table 17

Initial Level Of Care Needed Among TANF Recipients Needing AOD Treatment						
Regional Advisory Board Area	Detox		Residential		Outpatient	
	Estimated Number	Percent in RAB Area	Estimated Number	Percent in RAB Area	Estimated Number	Percent in RAB Area
Central	27	46.59	12	20.28	19	33.14
East Central	15	47.06	5	16.03	12	36.91
Northeast	14	78.35	0	0.00	4	21.65
Northwest	15	90.62	0	0.00	2	9.38
OKC	120	56.15	49	23.20	44	20.65
Southeast	8	24.04	25	71.99	1	3.97
Southwest	17	18.83	16	18.39	56	62.78
Tulsa	45	55.56	27	33.33	9	11.11
Statewide	262	48.15	135	24.81	147	27.04

Table 18

Regional Advisory Board Area	Residential Following Detox		Initial Residential		Total Residential Need	
	Estimated Number	Percent in RAB Area In Need of Detox	Estimated Number	Percent in RAB Area	Estimated Number	Percent in RAB Area
Central	23	14.44	12	20.28	34	58.62
East Central	15	9.38	5	16.03	20	64.52
Northeast	14	9.24	0	0.00	14	77.78
Northwest	3	2.21	0	0.00	3	17.65
OKC	83	52.73	49	23.20	132	61.97
Southeast	7	4.47	25	71.99	32	91.43
Southwest	3	1.76	16	18.39	19	21.11
Tulsa	9	5.77	27	33.33	36	44.44
Statewide	157	59.83	135	24.81	291	53.49

NUMBER OF RESPONDENTS IN NEED OF RESIDENTIAL TREATMENT AMONG TANF RECIPIENTS NEEDING AOD TREATMENT

Table 19 contains unweighted prevalence rates among telephone respondents and face-to-face respondents.

Table 19

Need for Treatment by Survey Methodology
Unweighted

Treatment Need	Telephone		Face-to-Face		Chi-Square	P-Value
	N	%	N	%		
Alcohol	146	17.12	29	17.79	0.0438	0.8343
Drug	144	16.88	28	17.18	0.0085	0.9264
Alcohol and Drug	58	6.80	17	10.43	2.6374	0.1044

When looking at the need for alcohol treatment, telephone and face-to-face respondents were very similar (17.1% vs. 17.8%, respectively), and the same was true for illicit drug treatment (16.8% vs. 17.2%, respectively). However, when looking at persons who needed both alcohol and illicit drug treatment, face-to-face respondents had a higher need for treatment of 10.4 percent, which was higher when compared to 6.8 percent for telephone respondents, though the difference was not statistically significant.

7. DISCUSSION

The survey of TANF recipients identified significant levels of treatment need and patterns of use among members of this population that warrant close attention by those planning and providing treatment. It was mentioned in the introduction to this study that DHS staff estimated the proportion of TANF recipients in need of

treatment was much larger than the percentage in need among members of the general population. The findings of the DMHSAS STNAP II Study #1 confirm the DHS perception. While the overall prevalence of treatment need among women in the general population survey conducted under STNAP I was 2.9 percent, the overall need for alcohol and/or illicit drug treatment among TANF participants was 24.5 percent, eight and a half times as high as the general population percentage for women.

Not only does the level of treatment need underline the importance of treating this group, but information about some of the patterns of use and abuse among subsets of TANF recipients can provide direction for decision-makers as well. The effects of alcohol, tobacco and other drug (ATOD) use during pregnancy may be generally known, but 40 percent of pregnant TANF recipients reported using tobacco in the last month and 61 percent in the past year. Eleven percent reported using alcohol in the last month and 56 percent in the last year. Those annual rates are close to the rates in the total TANF population. A much smaller percent (3.1%) reported using any illicit drug in the past month (marijuana only) and about 15 percent reported illicit drug use in the past year, indicating these women are aware of the importance of not taking (or of not reporting taking) drugs during pregnancy. Successful drug treatment would not only help substance abusing TANF recipients be more employable, but for those who are pregnant, would also reduce ATOD-related child health problems that could be obstacles to employment. It also appears that some TANF women who have had children in the past year return to their previous level of use of ATOD. Thus, providing effective treatment to TANF recipients, as with treatment of any parent, is likely to have secondary benefits by reducing children's exposure to ATOD use.

As planned, Study #1 made use of both telephone and face-to-face survey administration. The results provided some support for both the "no difference" and the "face-to-face rapport" theorists. For those whose responses indicated they only needed treatment for alcohol abuse or dependence, and those who only needed drug treatment, there was little difference in the rates identified by the two methods. However, for persons needing both alcohol and drug treatment, the face-to-face interviews identified a higher percentage of respondents with that level of need than did the telephone interviews. However, this result may be an artifact of the small number of face-to-face surveys in the alcohol-and-drug-treatment need category, rather than a real difference between the survey types.

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APPENDIX A: PRE-NOTIFICATION LETTERS

APPENDIX B: STNAP SURVEY QUESTIONNAIRE