SECTION ONE

KENTUCKY TREATMENT OUTCOME STUDY BACKGROUND
The costs of substance abuse treatment are also high and 70% of the burden for this treatment is born by public funding (Egertson, Fox, & Leshner, 1997). In Kentucky, the state spends approximately $33 million each year on substance abuse treatment through contracts with the 14 community mental health centers. Kentucky funds treatment with a combination of Federal Block Grant and state general funds.

Although there are many published substance abuse treatment outcome studies, funding sources continue to ask for current evaluations (Swearengen, Moyer, & Finney, 2004). Studies have reported that treatment is associated with reduced substance use and crime as well as improved employment (Hubbard, Craddock, Flynn, Anderson, & Etheridge, 1997; McLellan, Lewis, O’Brien, & Kleber, 2000; Simpson, Joe, & Broome, 2002). In addition, substance abuse treatment has been associated with economic benefits to society regardless of modality of treatment (Belenko, Patapis, & French, 2005). In fact, studies have shown that treatment outcomes can be beneficial even from very brief interventions (Hulse & Tait, 2003).

Kentucky funds substance abuse treatment services through the Division of Mental Health and Substance Abuse in the Department of Mental Health and Mental Retardation Services. The Division contracts with 14 Regional Community Mental Health Centers and their affiliated programs to provide services in all areas of the state. The client eligibility criteria for services (clinical need for treatment and low income) are set by the Division but are determined for clients by treatment centers as part of the intake process.

The Kentucky Treatment Outcome Study (KTOS) is designed to examine the outcomes of treatment using a pre-and post-test design with the pre-test data collected by clinicians during the intake process on clients who are entering treatment. The post-test follow-up data are collected by the University of Kentucky 12 months after the intake date.

**STUDY OVERVIEW**

In Kentucky, outpatient substance abuse treatment programs collect data within the first three treatment sessions as part of assessment processes. For residential programs, KTOS data are collected within the first three days of admission. All the various modalities of treatment (outpatient, IOP, residential) use the same instrument to collect client information. These data are part of the state client-level administrative data. The KTOS data are matched to other client-level administrative data on service events to further monitor and evaluate substance abuse treatment services (McCarty, McGuire, Harwood, & Field, 1998).

Clients who voluntarily agree to participate in the follow-up study must give informed consent to participate before giving personal locator information that is used to locate them for follow-up telephone interviews 12 months after treatment. The consent and follow-up process is approved by the University of Kentucky Institutional Review Board (IRB) and includes informing clients about the purpose of the follow-up study and the study’s confidentiality protections. The KTOS study has a Certificate of Confidentiality from the U.S. Department of Health and Human Services to further protect subjects’ confidentiality of records.
Follow-up data are collected from a sample of clients 12 months after treatment intake by the study staff under the direction of a study co-investigator at the University of Kentucky via phone interviews. A sample is drawn from all consenting client records. The follow-up data include the same items that were asked at baseline. This allows for comparisons of client data from intake to follow-up 12 months after treatment.

DATA DESCRIPTION

The FY 2004 KTOS baseline and follow-up data include the following client information:

- Demographic Characteristics
- Employment & Economic Status
- Justice System Involvement
- Alcohol Use
- Illegal Drug Use
- Medical and Psychological Status
- Treatment Utilization and self-help utilization

Information on each of these domains is collected for the past 30 days and past 12 months before treatment and for the past 30 days and past 12 months at follow-up. In addition, these client self-report data are used along with service event data to estimate the cost of treatment as part of the evaluation of avoided costs resulting from treatment outcomes. The questions for the FY 2004 KTOS study were developed using the Center on Substance Abuse Treatment’s (CSAT) primary data collection instrument, the Government Performance Results Act (GPRA), which is based on the Addiction Severity Index (ASI) (McLellan, et al., 1992). In addition, items were used to examine specific Kentucky concerns such as DUI offenses and participation in self-help.

STUDY PROTOCOL

Data are collected at baseline or intake by clinicians and follow-ups are conducted by project staff. Clients consent to the collection of intake information and submission of this information to the state as part of their permission/consent to treatment. This consent process is part of the state requirement when state or block grant funds support treatment costs. The KTOS data collection extends the basic client data set by focusing primarily on substance use within the preceding 30 days and within the past 12 months. The baseline KTOS data are submitted to the University of Kentucky Center on Drug and Alcohol Research (CDAR) as an agent acting on behalf of the state. Three data collection methods were used during this fiscal year as the project converted from a paper/pencil format to electronic versions. Of the 9,876 clients in the intake KTOS data collection, 3,712 (39.1%) used a new PDA-based KTOS program, 3,133 (33.0%) were completed using a PC version, and 2,643 (27.9%) were completed using hand filled out bubble sheet response forms.

Follow-up data are collected from telephone interviews conducted 12 months after treatment using the same measures that were used at intake. These data were entered into a database which was merged with the intake data for a complete pre-post set of data for each client.
SAMPLE

The follow-up participants were sampled from the pool of eligible consenting clients. Eligibility for inclusion in the follow-up sample was met if clients had face valid locator information consisting of two telephone numbers and an address. The consenting records were then sampled using a proportionate stratification by gender with the proportion consistent with the proportion of the baseline clients who were male and female (Pedhazur & Schmelkin, 1991). The proportionate stratification approach used in this study produces estimates that are as efficient as those of a simple random sample (Pedhazur & Schmelkin, 1991). Of the 9,876 clients at baseline, 5,406 gave consent and 3,136 had face valid locator information. One-half of these were used to sample by gender group. Thus, the sample was 1,568. Follow-up interviews were completed between October, 2004, and October, 2005. During this period, up to 15 call attempts were made by research assistants. Because a number of clients did not consent at baseline to participate in the follow-up interview, the representativeness of the follow-up sample and the generalizability of findings may be limited. When clients were unable to be contacted at their primary number, backup contact persons listed during the intake interview were contacted and third parties such as motor vehicle license bureaus and the internet were used in an attempt to locate the participant.

Quality control processes were used on a sample of the follow-up clients to examine the level of effort spent in making contact and verifying reasons for not making contact. Based on the quality control study of a random sample of 24.3% of the completed interviews and 25.9% of the not-contacted clients, there were over 4,700 calls made to those clients who were reached for follow-up interviews. There were 4,020 calls made in pursuit of clients who could not be reached. Thus, there were over 8,500 telephone calls made by research assistants to achieve interviews with 888 clients. A complete listing of the level of effort for the FY 2004 sample is presented in Appendix I of this report.

Of the 1,568 sampled for follow-up, 249 were ineligible. Of the 1,319 who were eligible, the Center on Drug and Alcohol Research was successful in locating and contacting 888 clients. The study follow-up rate was 67.3% 12 months after treatment. Less than half the consenting clients (n=431, or 32.7%) were unable to be contacted for the reasons listed below:

Ineligibility (n = 249)
- incarcerated (209)
- deceased (17)
- rehabilitation (12)
- health condition (8)
- hospitalization (1)
- other ineligibility (2)

Unsuccessful contact (n = 431)
- unsuccessful location of individual (309)
- refused to participate (30)
- unsuccessful contact with individual after 15 call attempts (50)
- non-contact by the time the study was closed (19)
- incorrect number – a computer or fax line (23)
Of the final 888 clients interviewed at follow-up, 416 (46.8%) had baseline interviews conducted on PDAs, 228 (25.7%) had been done using PC versions of the instrument, and 244 (27.5%) were completed using hand-written bubble sheets. All follow-up interviews were recorded on paper by the research assistant interviewers and were later entered into SPSS version 13.0.

ANALYSIS

This study examines change from intake to follow-up 12 months after treatment intake using two major analytic approaches. For changes in the percent of clients reporting substance use or related behavior, a z test for proportions was used to test for significance. For changes in the mean number of days of substance use from intake to follow-up, a paired samples t-test was used to test for significance. Findings were reported as significant if the p value was less than .01. In addition, policy makers who have relied on these report findings indicated that percent changes in abstinence and actual changes in the number of days of substance use are important ways to understand the effects of treatment. In all analyses of change in days of use, clients’ days of use were calculated using their days not in a controlled setting such as a hospital, prison or jail. In other words, their number of days of drug use was based on the proportion of days that they actually could obtain and use substances. This is presented in the tables as a proportion of days of use out of the past 30 days. Thus, for example, a client who had been in jail for 15 days in the past 30 days but reported marijuana use 10 of the past 30 days would be analyzed as using 67% of the time because the client used the drug 2 days out of the 3 he/she was on the street. Data were analyzed in SPSS version 13.0.