

February 2004

## **LONG-TERM OUTCOMES OF PUBLIC MENTAL HEALTH CLIENTS: PRELIMINARY REPORT**

In response to a performance audit of the state's mental health system, the 2001 Washington State Legislature passed ESSB 5583,<sup>1</sup> which calls for the development of an outcomes-based performance system to be implemented by the Department of Social and Health Services (DSHS). Section 5 directs the Washington State Institute for Public Policy (Institute) to conduct a longitudinal study of long-term state-funded mental health client outcomes. The legislation also indicates measures to be tracked, including services received, employment, education, housing stability, criminal justice involvement, and level of services needed. Funding was included in the 2001–03 biennial budget.<sup>2</sup> This report describes the research steps involved in this longitudinal study and provides preliminary information on the sample of individuals to be analyzed.

To obtain information on these outcomes, it is necessary to combine data from several sources: DSHS (mental health services and outcome data from Mental Health Division; prescription drug and physical health data from Medical Assistance Administration), Employment Security Department (employment data), Office of the Superintendent for Public Instruction (K–12 education data), and the judicial system (juvenile and adult criminal convictions). Because of differences in how these data are collected and maintained and potential problems, such as the use of multiple names (aliases) and data input errors, creating a single data file is a challenging process.

Calendar year 2002 is the “baseline” for the longitudinal analysis. Data have been collected for all persons receiving state-funded mental health services at any time during 2002. Subsequent data collection efforts will occur in 2004, 2007, and 2012. Comparing data from these follow-up periods on services, employment, education, housing stability, and criminal justice involvement to baseline data enables outcomes to be measured in these areas after two, five, and ten years.

### **Preliminary Analysis of Baseline Data**

Because of the time needed to collect, process, and then analyze the various data sources, the first scheduled report providing two-year outcome information based on the 2004 data will not be available until December 2005. Currently, data from the DSHS Mental Health Division (MHD) and the Office of the Superintendent of Public Instruction (OSPI) have been combined for the baseline year of 2002.

A snapshot of individuals whose outcomes will be analyzed over the ten-year period is described in Exhibit 1. This exhibit, based on MHD data, provides demographic and mental health information as well as baseline data on some outcome measures of interest, such as employment, living situation, and education for adults and children.

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<sup>1</sup> Chapter 334, Laws of 2001.

<sup>2</sup> ESSB 6153, Section 204(5)(a), Chapter 7, Laws of 2001.

**Exhibit 1**  
**Baseline Characteristics**

	Adults (Age 19+)	Children (Age 0 to 18)
<b>Demographic Information</b>		
Age Group as Percent of Patients	69.5%	30.5%
Caucasian	73.5%	65.2%
Non-White/Ethnicity Unknown	26.5%	34.8%
Female	55.8%	43.3%
Age (as of December 2002)	43.6	12.0
<b>Mental Health Diagnoses<sup>^</sup></b>		
Major Depression	19.7%	6.0%
Alcohol/Substance Abuse	15.3%	2.3%
Anxiety	15.3%	13.3%
Schizophrenia	14.0%	0.4%
Other Mood Disorders	13.9%	12.5%
Conduct Disorder	1.1%	22.9%
Attention Deficit Disorder	1.0%	17.8%
All Other Mental Health Disorders	3.1%	13.2%
No Diagnosis Recorded	16.6%	11.5%
<b>Mental Health Services</b>		
Average Annual Outpatient Hours of Service <sup>#</sup>	25.2	22.2
Percent of Patients With One or More Hospital Stays	8.6%	2.3%
Average Annual Inpatient Days for Patients With One or More Hospital Stays	44.1	36.5
<b>Employment Status<sup>*</sup></b>		
Not Employed	58.9%	75.5%
Part-Time Employment	4.8%	1.6%
Full-Time Employment	4.8%	0.8%
Retired	4.3%	0.0%
Volunteer Work	0.7%	0.1%
Supported Employment	0.5%	0.2%
Sheltered Workshop Employment	0.3%	0.0%
Employment Status Unknown/Missing	25.7%	21.8%
<b>Living Situation</b>		
Private Residence – No Support	55.2%	70.1%
Homeless	5.6%	1.3%
Private Residence – With Support	5.4%	4.0%
24-Hour Residential Care (e.g., group home)	4.5%	0.7%
Institutional Care (e.g., inpatient psychiatric hospital)	4.1%	0.2%
Prison/Jail/Juvenile Correction Facility	3.3%	4.0%
Foster Home	0.9%	7.6%
Living Situation Unknown/Missing	21.0%	12.2%
<b>Education</b>		
Not in an Educational Program	67.5%	8.4%
Full-Time Education	2.0%	72.4%
Part-Time Education	2.0%	6.4%
Education Status Unknown/Missing	28.5%	12.8%

Source: Institute analysis of DSHS Mental Health Division data.

<sup>^</sup> Individuals may be in multiple diagnosis categories.

<sup>\*</sup> Employment, living situation, and education reflect status in most recent month of data.

<sup>#</sup> Outpatient service hours do not include residential treatment or hot line services.

During 2002, approximately 127,000 persons, of whom almost 70 percent were adults, received services through MHD. The typical adult recipient of state-funded mental health services was Caucasian, female, and nearly 44 years of age. Major depression, alcohol and/or substance abuse, anxiety, and schizophrenia were the most frequently diagnosed mental health conditions, with individuals receiving an average of 25 hours of outpatient treatment. Fewer than 9 percent of adult recipients received any inpatient treatment; of those who did, patients received an average of 44 hospital days during the year.

The employment, living situation, and education data in Exhibit 1 are the most recent responses provided by recipients and may be more representative of a point in time rather than the entire year. Subject to this caveat, most adults in the sample were not working, were living in a private residence, and were not attending school.

An examination of children receiving mental health services reveals a number of differences compared with the adults in the sample. Children are more likely to be male and much more likely to be diagnosed with two diseases: conduct disorder and attention deficit disorder, which are rare among adults. The average amount of treatment, both outpatient and inpatient, is lower for children than for adults.

Not surprisingly, children are less likely to be employed and more likely to be in school than adults. Living situations also differ between the two groups, with homelessness being more prevalent among adults (6 percent of adults compared with 1 percent of children) and residence in foster care being more prevalent among children (8 percent of children compared with less than 1 percent of adults).

Data from OSPI for the 2001–02 school year provide a variety of information on students attending high school.<sup>3</sup> Exhibit 2 contains information on those persons receiving state-funded mental health services in 2002 who were also attending high school in the 2001–02 school year.

**Exhibit 2**  
**Baseline Characteristics, OSPI Data**

Characteristic	
<b>MHD Recipients of “High School Age” (14 to 18 Years)</b>	15,997
<b>Number of MHD Recipients Matched to OSPI Data<sup>^</sup></b>	8,107
Days Attended	126.1
Days Enrolled	147.0
Grade Point Average	1.99
<b>Verified High School Status*</b>	
Dropout	7.7%
GED Recipient	1.3%
Graduate	5.7%

Source: Institute analysis of OSPI and MHD data.

<sup>^</sup> Ages of MHD recipients identified by OSPI data as in high school range from 13 to 22 years old.

\* Student status is not always available, so these rates may be understated.

<sup>3</sup> As of the 2002–03 school year, the student-level data collected by OSPI include both middle school and high school students.

Although nearly 16,000 individuals receiving state-funded mental health services are in the 14- to 18-year age range typical of high school students, only 8,107 persons identified with MHD data can be matched to the OSPI data on high school students. This includes a few students younger (age 13) or older (ages 19 through 22) than typical high school students.

This discrepancy can be explained in two ways. First, not all of the 14- to 18-year-old recipients in the MHD data can be expected to be attending high school. About 4,800 of the 14- to 18-year-olds indicate they are not attending any educational program. This group includes both persons who have graduated from high school and dropouts. In addition, some individuals in this age group (especially those age 18) who report attendance in an educational program may be enrolled in post-secondary programs.

Second, the precision with which information on individuals is matched across multiple data sets depends upon the precision of data collection and data entry processes. The use of aliases, transposition of numbers in a birth date, or typographical errors all contribute to difficulties in correctly matching data. Although sophisticated data matching routines can reduce errors from these sources, some data mismatches are inevitable.

Those persons identified by OSPI data as high school students were enrolled an average of 147 days during the 2001–02 school year and attended an average of 126 days.<sup>4</sup> The grade point average, calculated on a scale from zero to four, was 1.99.

The OSPI high school data also provide information on those students who drop out of school, attain a General Education Development Certificate (GED), or graduate during the school year. Because students may drop out, obtain a GED, or move without informing their high school, the rates reported here may be understated.

## Next Steps

Other data sources for calendar year 2002 will be matched to the MHD and OSPI data to complete the full baseline data set. In approximately two years, calendar year 2004 data will be available to create the first follow-up report. Due in December 2005, the report will provide information on changes in employment, education, housing stability, and criminal justice involvement over the 2002 to 2004 time period. To the extent that individuals continue to receive state-funded mental health services, information will also be provided on changes in mental health status and services received.

For further information on this study, please contact Stephen Lerch, Ph.D., at (360) 586-2767 or [lerchs@wsipp.wa.gov](mailto:lerchs@wsipp.wa.gov).

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<sup>4</sup> A full school year is 180 days.