

EMPLOYMENT CHARACTERISTICS OF CLIENTS RECEIVING PUBLIC MENTAL HEALTH SERVICES

Introduction

The 2001 Washington State Legislature passed ESSB 5583 requiring the Department of Social and Health Services (DSHS) to develop an outcomes-based performance system for public mental health services. In particular, the Legislature is interested in “using outcome information to identify and provide incentives for best practices in the provision of public mental health services.”¹ To that purpose, ESSB 5583 directed the Washington State Institute for Public Policy (Institute) to conduct a longitudinal study of state-funded mental health client outcomes. This report combines data from multiple agencies to describe the employment outcomes of DSHS Mental Health Division (MHD) clients who received services in 2002.

Data Sources

The MHD provided data on clients who used public mental health services in 2002. These data were merged with information on earnings and hours worked collected by the Washington State Employment Security Department (ESD). Additionally, state and county population projection data from the Office of Financial Management (OFM) were used to describe the demographic characteristics of the statewide population and of the Regional Support Networks (RSN) that provide mental health services for MHD clients. The Institute’s analysis of data from the OFM 2002 State Population Survey was also used to provide estimates of statewide employment outcomes not readily available yet comparable to the measures used in this report.

Summary

Data on adults who were served by the state’s public mental health system in 2002 were merged with statewide data used to track earnings for unemployment insurance purposes (covered employment). The resulting analysis shows that relatively few adults served by the state Mental Health Division (MHD) are employed. MHD clients who do work tend to work substantially fewer hours, have considerably lower total earnings, and work for far lower wages than adults in the general population. In 2002:

- 27 percent of adult MHD clients worked at least one quarter of the year compared with 70 percent of the state’s general population.
- MHD clients who worked at least one quarter earned \$8,368 annually compared with the general population average of \$38,240.
- Employed MHD clients worked 673 hours on average while the general population averaged about 1,700 hours.
- Half of all employed MHD clients earned \$9 per hour or less. Statewide, half of all workers in covered employment earned over \$16.95 per hour.
- One in ten MHD clients worked during every quarter of the year, earning \$17,000 and working 1,300 hours on average.

Characteristics associated with lower employment rates and/or earnings for MHD clients include the following:

- Older age and ethnic minority status; and
- Inpatient status, diagnoses of dementia, autism, or schizophrenia and low Global Assessment Functioning (GAF) scores; however,
- No remarkable patterns emerged regarding clients’ living situations or geographic settings.

The 90,301 MHD clients examined in this analysis will be followed for several years. Future analyses will examine changes in their employment status and earning patterns over time.

¹ Chapter 334, Laws of 2001.

Methods

Merging Data Sources. For this study, “common identifiers” such as name, gender, birth date, and Social Security Number (SSN) are used to locate records for the same person across a variety of data systems from different agencies. The merge between MHD and ESD used the SSN field only. Specifically, MHD data were merged with the ESD Unemployment Insurance (UI) wage and hours file.² Since administrative records generally are not intended for research purposes or for merging across agencies, merging these data presents challenges and, in some cases, results in certain data limitations.³

Analyses. The analyses in this report describe the demographic characteristics of MHD clients and their living situations, diagnoses, and inpatient/outpatient status. Employment characteristics—earnings, hours worked, and wages—of MHD clients overall and among MHD subgroups are presented in detail. The estimates in all analyses are expressed as percentages, hours worked, and dollars earned, whether as that of the state’s general population, the total MHD clientele, or a subgroup of MHD clients. Where data permit, demographics and employment characteristics of the state’s general population and subgroups are also presented. Comparative observations are made among various MHD subgroups and, where possible, between an MHD subgroup and the corresponding state population

subgroup.⁴ Analyses are based on adults 19 years old or older as of December 31, 2002. The state population for 2002 is estimated at 4,432,000, approximately 2 percent of which (90,301) used services provided by the MHD.

Employment Characteristics of Adult MHD Clients

Adult clients of the state’s mental health system are considerably less likely to be employed, work significantly fewer hours, and earn lower wages than adults statewide (see Exhibit 1). Overall, only 26.8 percent of MHD clients in 2002 were employed during at least one quarter compared with 68.7 percent of the state’s general adult population.⁵

MHD clients who work earn considerably less than adults in the state’s general population. During 2002, employed MHD clients earned \$8,368 on average compared with the statewide average of \$38,240. MHD clients earn less than those in the general population because they work fewer hours, work for lower hourly wages, or both.

Employed MHD clients worked an average of 673 hours during 2002. Statewide, the average employed adult worked almost 1,700 hours. Assuming a full-time employee works 2,080 hours, in full-time equivalent (FTE) terms, the average MHD client in 2002 represented .32 FTEs compared with .82 FTEs per employed adult statewide.

Employed MHD clients earned an average of \$11.92 per hour in 2002 compared with the

² Clients are considered employed if their SSN corresponds to a record of earnings in ESD’s 2002 UI wage and hours file. The UI file also reports the number of hours worked, from which hourly wages are derived. Because hours worked are not reported consistently, data on hours worked and hourly wages are less reliable than earnings.

³ Wei Yen and Jim Mayfield, 2005, *Long-Term Outcomes of Public Mental Health Clients: Additional Baseline Characteristics*, Olympia: Washington State Institute for Public Policy.

⁴ No statistical significance tests, however, are attempted to explain the differences among the various subgroups, as the administrative records reflect the entire population of the targeted group.

⁵ For several reasons, other Institute reports may show slightly different employment rates and earnings for MHD clients: the analyses may be based on different subgroups, additional data cleaning methods are incorporated into these ongoing analyses, and data are periodically updated.

statewide average of \$22.61 per hour. Half of all employed MHD clients earned \$9 per hour or less. Statewide, half of all workers covered by the state's employment insurance program earned over \$16.95 per hour.⁶ Only 9.4 percent of MHD clients worked every quarter during 2002 (see Exhibit 2). MHD clients who worked every quarter (full- or part-time) earned just over \$17,000 on average and worked approximately 1,300 hours at an average wage of \$13.16 per hour.

Exhibits 1 through 6 summarize selected employment outcomes according to demographics, RSN, patient status, major mental health conditions, Global Assessment of Functioning (GAF) scores, and primary living situations.⁷ The employment outcomes examined are 2002 employment rates, total earnings (for those who worked), hours worked, and hourly wages.⁸ Employment outcomes are provided in separate tables for those employed any time during the year and those employed during all four quarters. When available, statewide employment data for the general population are provided for comparison.

The following sections describe the employment characteristics of MHD client subgroups by age, gender, and race/ethnicity (Exhibits 1 and 2); by RSN (Exhibits 3 and 4); and by patient status, primary diagnosis, GAF scores, and primary living situation (Exhibits 5 and 6). Where available, data on employment characteristics for the corresponding state population groups are also provided.

This paper examines MHD client employment patterns with respect to a limited set of demographic and program variables provided by MHD. Other factors directly or indirectly associated with employment, such as education, employment history, and program participation, are not discussed here. Future analyses will examine in greater detail the prevalence of other issues, such as Medicaid eligibility,⁹ that may be associated with MH client employment outcomes.

⁶ Scott Bailey, 2004, *Washington Wage Report*, Olympia, WA: Labor Market and Economic Analysis Branch, Washington State Employment Security Department, page 3.

⁷ For a detailed discussion of MHD client demographics and other characteristics, see Wei Yen, 2005, *Criminal Justice Involvement Among Clients of Public Mental Health Services*, Olympia: Washington State Institute for Public Policy, Document No. 05-10-3901.

⁸ The data used to describe employment outcomes include only employment covered by Washington State's Unemployment Insurance program (i.e., covered employment).

⁹ A recent study links employment rates of MH clients with eligibility for medical assistance: G. Hannah, 2005, *Employment and Mental Health Service Utilization in Washington State* (Draft 1), Seattle: University of Washington, 25.

Exhibit 1
Employment Characteristics of Washington State MHD Clients:
Persons Employed During Any Single Quarter in 2002 by Demographics

	General Population and MHD Clients							
	Percent Employed		Annual Earnings		Hours Worked		Hourly Wage	
	State	MHD	State	MHD	State	MHD	State	MHD
<u>Total</u>	68.7%	26.8%	\$38,240	\$8,368	1,691	673	\$22.61	\$11.92
<u>Age</u>								
19–34	77.0%*	42.2%	N/A	\$7,136	N/A	637	\$17.05*	\$10.96
35–49	84.0%*	27.0%	N/A	\$9,293	N/A	700	\$22.72*	\$12.71
50–64	71.0%*	14.5%	N/A	\$11,307	N/A	764	\$24.58*	\$13.92
65+	13.0%*	2.0%	N/A	\$10,538	N/A	718	\$24.93*	\$13.70
<u>Gender</u>								
Male	75.0%*	26.7%	N/A	\$8,809	N/A	664	\$23.48*	\$12.45
Female	62.0%*	26.9%	N/A	\$8,015	N/A	681	\$18.96*	\$11.48
<u>Race</u>								
American Indian/ Alaska Native	65.0%*	29.9%	N/A	\$7,996	N/A	643	\$17.03*	\$12.27
African American	73.0%*	26.3%	N/A	\$5,721	N/A	489	\$16.92*	\$11.00
Asian	70.2%*	21.0%	N/A	\$8,359	N/A	723	\$18.15*	\$10.76
White	68.0%*	24.9%	N/A	\$7,122	N/A	613	\$22.03*	\$11.47
<u>Hispanic Origin</u>								
Hispanic	65.0%*	31.8%	N/A	\$7,859	N/A	756	\$16.17*	\$10.19
Non-Hispanic	68.0%*	26.5%	N/A	\$8,396	N/A	668	\$21.73*	\$12.01

* Estimates from OFM 2002 State Population Survey data. Employment rates by demographic subgroup represent 2001 levels; 2001 annual earnings and hours are omitted because they may not be comparable to ESD data.

Age and Employment. Four adult age groups are used in this report: 19 to 34, 35 to 49, 50 to 64, and 65 and older. The majority of adult MHD clients, 70 percent, were between 18 and 50 years old (see Exhibit 7).

Again, 26.8 percent of all adult MHD clients were employed at sometime during 2002 compared with 68.7 percent of adults statewide. Those 65 and older have the lowest employment rates (see Exhibit 1), both statewide and particularly among MHD clients (13 percent and 2 percent, respectively).

The highest employment rate among MHD clients, 42.2 percent for those in the 19- to 34-year-old age group, is still considerably lower than the employment rate of same age group

in the state's general population (77 percent). With increases in age, however, the employment rates of MHD clients decline in both absolute terms and relative to the state population. A similar pattern exists for MHD clients who worked every quarter in 2002 (see Exhibit 2).

While MHD clients in older age groups are considerably less likely to work than other MHD clients, older MHD clients who do work earn more on average because they work more hours and earn higher hourly wages. For instance, MHD clients in the 50- to 64-year-old group worked an average of 764 hours at \$13.92 per hour compared with 637 hours at \$10.96 per hour for the 19- to 34- year-old age group.

Exhibit 2
Employment Characteristics of Washington State MHD Clients:
Persons Employed During Every Quarter in 2002 by Demographics

	General Population and MHD Clients							
	Percent Employed		Annual Earnings		Hours Worked		Hourly Wage	
	State	MHD	State	MHD	State	MHD	State	MHD
<u>Total</u>	N/A	9.4%	N/A	\$17,079	N/A	1,294	N/A	\$13.16
<u>Age</u>								
19–34	N/A	13.8%	N/A	\$15,047	N/A	1,265	N/A	\$12.00
35–49	N/A	9.8%	N/A	\$18,483	N/A	1,322	N/A	\$13.92
50–64	N/A	6.2%	N/A	\$20,464	N/A	1,312	N/A	\$15.26
65+	N/A	0.8%	N/A	\$22,260	N/A	1,401	N/A	\$15.67
<u>Gender</u>								
Male	N/A	8.9%	N/A	\$18,657	N/A	1,327	N/A	\$13.79
Female	N/A	9.9%	N/A	\$15,923	N/A	1,269	N/A	\$12.69
<u>Race</u>								
American Indian/ Alaska Native	N/A	9.4%	N/A	\$17,760	N/A	1,323	N/A	\$13.66
African American	N/A	7.1%	N/A	\$13,993	N/A	1,114	N/A	\$12.14
Asian	N/A	8.0%	N/A	\$16,578	N/A	1,366	N/A	\$11.41
White	N/A	8.3%	N/A	\$14,830	N/A	1,209	N/A	\$12.35
<u>Hispanic Origin</u>								
Hispanic	N/A	11.6%	N/A	\$15,573	N/A	1,409	N/A	\$11.28
Non-Hispanic	N/A	9.3%	N/A	\$17,163	N/A	1,287	N/A	\$13.26

Gender and Employment. In both the MHD caseload and the state population, there were more females than males. However, there were even proportionally more females in the MHD caseload than in the state population (see Exhibit 7).

Female and male MHD clients were almost equally likely (26.9 and 26.7 percent, respectively) to be employed at least one quarter during 2002. While female MHD clients worked slightly more hours, they earned less over all. The average hourly wages for male and female MHD clients were \$12.45 and \$11.48, respectively (see Exhibit 1). For those working every quarter, males earned more than females, worked more

hours, and also earned higher wages on average (see Exhibit 2).

According to the 2002 State Population Survey, 75 percent of males in the general population reported employment compared with 62 percent of females. Males and females earned approximately \$23.48 and \$18.96 per hour, respectively.¹⁰

Race and Employment. This study includes information on four racial groups—American Indian/Alaska Native, African American, Asian American/Pacific Islander (Asian), and White—and Hispanic origin. As in the

¹⁰ Employment rates and earnings for the general population reflect employment in 2001. Hourly wages reflect employment for 2002.

general population, the great majority of MHD clients were white, non-Hispanics (see Exhibit 7).

MHD clients in the Asian group were the least likely to be employed (21 percent) in at least one quarter during 2002 (see Exhibit 1). Those in the American Indian/Alaska Native group had the highest employment rate at 29.9 percent but were still considerably less likely to be employed than adults in the general population (68.7 percent). According to the 2002 State Population Survey, the American Indian/Alaska Native group in the general population was least likely to be employed in the general population (65 percent vs. 68.7 percent, respectively).¹¹

Compared with all MHD clients who worked at some point during 2002, African Americans earned the least (\$5,721) and worked the fewest hours (489) on average (see Exhibit 1). Asian MHD clients earned the most (\$8,359) and worked the most hours (723), still considerably less than the \$38,240 average earnings and 1,691 hours worked in the general population.¹² Average hourly wages ranged from \$10.76 per hour for Asian MHD clients to \$12.27 for clients in the American Indian/Alaska Native group. Similar patterns with respect to racial groups are seen for MHD clients who worked every quarter in 2002 (see Exhibit 2).

MHD data on Hispanic origin was collected independently of race. The percentage of Hispanic MHD clients ever employed in 2002

was 31.8 percent compared with 26.5 percent for non-Hispanic clients (see Exhibit 1). In the state's general population, the corresponding employment rates for Hispanics and non-Hispanics were roughly the same. Hispanic MHD clients earned less than non-Hispanics (\$7,859 vs. \$8,396), worked more hours (756 vs. 668), and earned lower wages (\$10.19 vs. \$12.01) on average. Similar patterns hold for MHD clients who worked every quarter during the year (see Exhibit 2).

Regional Support Networks (RSN) and Employment. MHD services are provided by 14 RSNs (see Exhibit 3). In 2002, the King RSN served the largest proportion of the state's population (30.7 percent) and also had the largest number of MHD clients (25.3 percent). The smallest RSN in terms of the size of the general population covered, the Northeast RSN (1.1 percent), also had the smallest percentage of MHD clients (1.4 percent). Other large RSNs that had over 10 percent of the total MHD caseload include North Sound (13.8 percent), Pierce (12.4 percent), and Greater Columbia (12.3 percent).

Employment rates for MHD clients were higher than the 26.8 percent statewide average in the Pierce, North Sound, North Central, Greater Columbia, Southwest, and Chelan/Douglas RSNs (see Exhibit 3). The highest employment rates were in the Chelan/Douglas and Greater Columbia RSNs, where 35.1 percent and 34.8 percent of their MHD clients were employed, respectively. The lowest MHD client employment rates were in the Timberlands (20.5 percent) and Thurston/Mason (21.7 percent) RSNs. No RSN had employment rates for MHD clients near the statewide employment rate for the general population (68.7 percent employed at least one quarter in 2002). The share of MHD clients who worked during every quarter in 2002 varied considerably, from 13.1 percent in Greater Columbia to 6.7 percent in Thurston/Mason RSN (see Exhibit 3).

¹¹ Averages for the general population are estimated based on the 2002 State Population Survey, which has a plus or minus 1.7 percent margin of error.

¹² Over 30 percent of the records examined for this analysis were missing information on race. Compared with clients *missing* race data, clients *with* race data were slightly less likely to be employed (25.1 percent vs. 26.8 percent), earned less (\$7,074 vs. \$8,368), work fewer hours (607 vs. 673), and earn slightly lower wages (\$11.44 vs. \$11.92), on average. The bias in employment outcomes with respect to missing and non-missing race data complicates the interpretation of these results.

Exhibit 3
Employment Characteristics of Washington State MHD Clients:
Persons Employed During Any Single Quarter in 2002 by Regional Support Network

	General Population and MHD Clients							
	Percent Employed		Annual Earnings		Hours Worked		Hourly Wage	
	State	MHD	State	MHD	State	MHD	State	MHD
Total	68.7%	26.8%	\$38,240	\$8,368	1,691	673	\$22.61	\$11.92
Regional Support Network (RSN)								
Chelan/Douglas	N/A	35.1%	N/A	\$8,341	N/A	719	N/A	\$11.10
Clark	N/A	25.6%	N/A	\$7,335	N/A	604	N/A	\$11.97
Grays Harbor	N/A	26.4%	N/A	\$7,976	N/A	650	N/A	\$11.57
Greater Columbia	N/A	34.8%	N/A	\$8,373	N/A	731	N/A	\$11.23
King	N/A	23.8%	N/A	\$8,864	N/A	667	N/A	\$12.51
North Central	N/A	29.8%	N/A	\$7,139	N/A	672	N/A	\$10.64
North Sound	N/A	27.6%	N/A	\$8,920	N/A	679	N/A	\$12.40
Northeast	N/A	23.7%	N/A	\$7,702	N/A	687	N/A	\$10.74
Peninsula	N/A	25.2%	N/A	\$7,289	N/A	627	N/A	\$11.35
Pierce	N/A	27.7%	N/A	\$8,996	N/A	655	N/A	\$12.75
Southwest	N/A	33.5%	N/A	\$7,302	N/A	652	N/A	\$11.74
Spokane	N/A	23.3%	N/A	\$6,490	N/A	595	N/A	\$10.58
Thurston/Mason	N/A	21.7%	N/A	\$7,361	N/A	581	N/A	\$11.97
Timberlands	N/A	20.5%	N/A	\$8,849	N/A	729	N/A	\$11.74

On average, MHD clients earned \$8,368 annually. They earned from a low of \$6,490 annually in the Spokane RSN to a high of \$8,996 annually in the Pierce RSN, still considerably lower than the \$38,240 state general population average (see Exhibit 3). Similarly, MHD clients who worked in all four quarters of 2002 earned from a low of \$14,105 in Spokane to a high of \$19,697 in Pierce RSN (see Exhibit 4).

From a low of 581 hours in Thurston/Mason RSN, to a high of 731 in Greater Columbia RSN, MHD clients worked an average of 673 hours annually. Hourly wages clustered closely about the statewide mean of \$11.92, ranging from above \$12.50 per hour in the Pierce and King RSNs to below \$10.75 per hour in the Spokane and Northeast RSNs. Similar patterns related to RSNs are observed for MHD clients who worked every quarter (see Exhibit 4).

Exhibit 4
Employment Characteristics of Washington State MHD Clients:
Persons Employed During Every Quarter in 2002 by Regional Support Network

	General Population and MHD Clients							
	Percent Employed		Annual Earnings		Hours Worked		Hourly Wage	
	State	MHD	State	MHD	State	MHD	State	MHD
Total	N/A	9.4%	N/A	\$8,368	N/A	1,294	N/A	\$13.16
Regional Support Network (RSN)								
Chelan/Douglas	N/A	12.4%	N/A	\$17,434	N/A	1,419	N/A	\$12.12
Clark	N/A	8.0%	N/A	\$16,167	N/A	1,245	N/A	\$13.36
Grays Harbor	N/A	8.7%	N/A	\$17,601	N/A	1,360	N/A	\$13.01
Greater Columbia	N/A	13.1%	N/A	\$16,067	N/A	1,324	N/A	\$12.36
King	N/A	8.9%	N/A	\$17,507	N/A	1,268	N/A	\$13.50
North Central	N/A	10.4%	N/A	\$14,149	N/A	1,259	N/A	\$11.56
North Sound	N/A	9.9%	N/A	\$17,989	N/A	1,295	N/A	\$13.80
Northeast	N/A	7.9%	N/A	\$16,426	N/A	1,352	N/A	\$12.67
Peninsula	N/A	8.1%	N/A	\$15,088	N/A	1,231	N/A	\$12.28
Pierce	N/A	9.2%	N/A	\$19,697	N/A	1,326	N/A	\$14.61
Southwest	N/A	10.4%	N/A	\$15,443	N/A	1,306	N/A	\$12.49
Spokane	N/A	7.3%	N/A	\$14,105	N/A	1,204	N/A	\$11.83
Thurston/Mason	N/A	6.7%	N/A	\$16,912	N/A	1,181	N/A	\$13.88
Timberlands	N/A	7.1%	N/A	\$18,546	N/A	1,435	N/A	\$12.87

Patient Status and Employment. Patient status refers to whether the client is specified as an inpatient or outpatient in the MHD data. An inpatient is defined here as a client who was admitted as an overnight patient in a state or community hospital at any time during 2002 (it does not necessarily represent the client's status over the entire year). The remaining clients are designated as outpatients.¹³ One in ten of the MHD adult clients in 2002 were inpatients (see Exhibit 7).

Measured in terms of any employment during 2002, both groups of MHD clients—inpatient and outpatient—were employed at about the 26.8 percent statewide average for all clients (see Exhibit 5). As would be expected,

Exhibit 6 shows MHD clients with inpatient status during 2002 were less likely to work in every quarter than were clients with outpatient-only status (5.8 percent vs. 9.8 percent, respectively).

Exhibit 5 shows that inpatient MHD clients who worked at least one quarter during 2002 earned less than MHD clients with outpatient status (\$6,095 vs. \$8,627); they worked fewer hours (497 vs. 693), but they earned only slightly lower hourly wages on average (\$11.72 vs. \$11.94). A similar pattern was observed for inpatient and outpatient clients who worked in every quarter in 2002 (see Exhibit 6).

¹³ An inpatient could also have been an outpatient at other times of the year, but for simplification of analysis, we consider a client with both inpatient and outpatient statuses as having inpatient status only.

Exhibit 5
Employment Characteristics of Washington State MHD Clients:
Persons Employed During Any Single Quarter in 2002 by
Patient Status, Diagnosis, GAF, and Living Situation

	General Population and MHD Clients							
	Percent Employed		Annual Earnings		Hours Worked		Hourly Wage	
	State	MHD	State	MHD	State	MHD	State	MHD
Total	68.7%	26.8%	\$38,240	\$8,368	1,691	673	\$22.61	\$11.92
Patient Status								
Inpatient	N/A	26.4%	N/A	\$6,095	N/A	497	N/A	\$11.72
Outpatient	N/A	26.6%	N/A	\$8,627	N/A	693	N/A	\$11.94
Primary Diagnosis								
ADD	N/A	37.7%	N/A	\$5,445	N/A	514	N/A	\$11.39
Anxiety	N/A	27.4%	N/A	\$6,870	N/A	627	N/A	\$10.86
Autism	N/A	20.0%	N/A	\$4,788	N/A	510	N/A	\$9.27
Bipolar	N/A	27.4%	N/A	\$6,690	N/A	562	N/A	\$11.56
Conduct Disorder	N/A	31.4%	N/A	\$5,776	N/A	540	N/A	\$10.59
Dementia	N/A	5.0%	N/A	\$7,735	N/A	621	N/A	\$11.32
Major Depression	N/A	26.9%	N/A	\$7,591	N/A	648	N/A	\$11.60
No Diagnosis	N/A	25.5%	N/A	\$10,087	N/A	743	N/A	\$12.88
Other Childhood Disorders	N/A	25.0%	N/A	\$5,419	N/A	580	N/A	\$15.37
Other MH Disorders	N/A	37.5%	N/A	\$9,132	N/A	747	N/A	\$11.73
Other Mood Disorders	N/A	32.0%	N/A	\$7,461	N/A	641	N/A	\$11.47
Other Psychotic Disorders	N/A	23.3%	N/A	\$7,237	N/A	566	N/A	\$11.58
Personality Disorders	N/A	23.3%	N/A	\$5,702	N/A	516	N/A	\$11.03
Schizophrenia	N/A	15.1%	N/A	\$5,550	N/A	521	N/A	\$10.37
Substance Abuse	N/A	30.0%	N/A	\$6,677	N/A	532	N/A	\$11.83
GAF								
Below 50	N/A	19.0%	N/A	\$6,207	N/A	513	N/A	\$11.49
Equal to or Above 50	N/A	32.0%	N/A	\$7,792	N/A	692	N/A	\$11.22
Primary Living Situation								
Any Private Residence	N/A	28.0%	N/A	\$7,984	N/A	675	N/A	\$11.55
Foster Home Only	N/A	12.0%	N/A	\$4,187	N/A	467	N/A	\$11.18
24-Hour Residential Care	N/A	8.0%	N/A	\$6,114	N/A	498	N/A	\$10.89
Institutional Setting Only	N/A	2.0%	N/A	\$8,870	N/A	693	N/A	\$10.40
Jail/Juvenile Facility Only	N/A	23.0%	N/A	\$5,804	N/A	447	N/A	\$11.52
Homeless/Shelter Only	N/A	28.0%	N/A	\$4,594	N/A	380	N/A	\$11.40
Other	N/A	25.0%	N/A	\$6,019	N/A	499	N/A	\$11.35

Primary Diagnoses and Employment.

MHD data contain information on primary and secondary diagnoses of the clients, though at times the information is missing (“No Diagnosis”). For this report, only the primary diagnoses are used. Over 16 percent of the 2002 MHD clients had no primary diagnosis. The leading primary diagnoses are major depression, schizophrenia, and bipolar and anxiety disorders (see Exhibit 7).

Clients with a primary diagnosis of major depression were employed at about the statewide average for all MHD clients (26.9 percent vs. 26.8 percent). For some diagnoses, however, employment rates varied remarkably. Over 37 percent of clients diagnosed primarily with ADD or with other MH disorders worked at least one quarter during 2002 (see Exhibit 5). Clients with primary diagnoses of anxiety, bipolar disorder, conduct disorder, other mood disorders, or substance abuse were also more likely to be employed than the average MHD client.

On the other extreme, only 5 percent of clients diagnosed with dementia and 15.1 percent of clients diagnosed with schizophrenia worked at some time during 2002 (see Exhibit 5). Other primary diagnoses associated with lower-than-average employment rates included autism, other childhood disorders, other psychotic disorders, and personality disorders. Just over 25 percent of clients with no primary diagnosis were employed at some time during 2002. The percentage of clients who worked every quarter during 2002 ranged from a low of 1.8 percent among those diagnosed primarily with dementia to a high of 14.2 percent for those with a primary diagnosis of other MH disorders.

Among MHD clients who worked at any time during the year, annual earnings ranged from a low of \$4,788 for those diagnosed with autism to a high of \$9,132 for those diagnosed with other MH disorders (see Exhibit 6). Those without a diagnosis earned

\$10,087. Annual earnings for those who worked every quarter ranged from a low of \$8,573 for those diagnosed with autism to \$17,667 for those diagnosed with substance abuse disorder (see Exhibit 6). Clients with no diagnosis earned \$20,234.

Clients with primary diagnoses of autism, ADD, or personality disorders worked the fewest hours on average (for those working at any time during the year). Those with autism also earned considerably less than the average hourly wage for all MHD clients (\$9.27 vs. \$11.92). Only those clients with no primary diagnosis and a small group of clients coded as having other childhood disorders earned above-average hourly wages. Similar patterns relative to diagnoses were seen for MHD clients who worked every quarter.

GAF Scores and Employment. To monitor treatment progress, MHD clients are given a Global Assessment of Functioning (GAF) assessment at in-take to an RSN and during follow-up evaluations. The assessment uses a scoring system of 1 to 100 points, with higher scores indicating better functioning. The GAF score used in this report is the average of the scores collected in 2002 for each client. For this report, GAF scores are classified into two groups: scores below 50 and scores of 50 or greater. Half of MHD clients scored below 50 and half scored 50 or higher. GAF scores are missing for 30 percent of MHD clients.

Several patterns emerge concerning MHD client GAF scores. Clients with higher GAF scores are more likely to have worked (see Exhibit 5) at any time during the year than those with lower scores (32 percent vs. 19 percent). Clients with higher GAF scores also earn more (\$7,792 vs. \$6,207) and work more hours (692 vs. 513) than clients with lower scores. For clients who work during at least one quarter during the year, there are no remarkable differences in hourly wages associated with higher or lower GAF scores.

Exhibit 6
Employment Characteristics of Washington State MHD Clients:
Persons Employed During Every Quarter in 2002 by
Patient Status, Diagnosis, GAF, and Living Situation

	General Population and MHD Clients							
	Percent Employed		Annual Earnings		Hours Worked		Hourly Wage	
	State	MHD	State	MHD	State	MHD	State	MHD
<u>Total</u>	N/A	9.4%	N/A	\$17,079	N/A	1,294	N/A	\$13.16
<u>Patient Status</u>								
Inpatient	N/A	5.8%	N/A	\$15,813	N/A	1,184	N/A	\$12.97
Outpatient	N/A	9.8%	N/A	\$17,147	N/A	1,301	N/A	\$13.15
<u>Primary Diagnosis</u>								
ADD	N/A	10.7%	N/A	\$12,991	N/A	1,140	N/A	\$11.43
Anxiety	N/A	9.0%	N/A	\$14,402	N/A	1,241	N/A	\$11.73
Autism	N/A	9.1%	N/A	\$8,573	N/A	882	N/A	\$9.04
Bipolar	N/A	8.3%	N/A	\$15,148	N/A	1,193	N/A	\$12.71
Conduct Disorder	N/A	9.4%	N/A	\$12,979	N/A	1,142	N/A	\$10.64
Dementia	N/A	1.8%	N/A	\$15,132	N/A	1,176	N/A	\$12.05
Major Depression	N/A	9.0%	N/A	\$15,825	N/A	1,268	N/A	\$12.70
No Diagnosis	N/A	9.3%	N/A	\$20,234	N/A	1,393	N/A	\$14.50
Other Childhood Disorders	N/A	5.0%	N/A	\$14,552	N/A	1,317	N/A	\$10.91
Other MH Disorders	N/A	14.2%	N/A	\$17,509	N/A	1,352	N/A	\$13.18
Other Mood Disorders	N/A	10.5%	N/A	\$15,811	N/A	1,286	N/A	\$12.30
Other Psychotic Disorders	N/A	7.2%	N/A	\$16,782	N/A	1,208	N/A	\$13.43
Personality Disorders	N/A	6.3%	N/A	\$13,782	N/A	1,150	N/A	\$12.05
Schizophrenia	N/A	5.6%	N/A	\$11,144	N/A	1,006	N/A	\$10.82
Substance Abuse	N/A	7.6%	N/A	\$17,667	N/A	1,268	N/A	\$14.19
<u>GAF</u>								
Below 50	N/A	5.2%	N/A	\$15,122	N/A	1,153	N/A	\$12.87
Equal to or Above 50	N/A	12.1%	N/A	\$15,005	N/A	1,269	N/A	\$11.99
<u>Primary Living Situation</u>								
Any Private Residence	N/A	10.0%	N/A	\$15,819	N/A	1,265	N/A	\$12.61
Foster Home Only	N/A	5.0%	N/A	\$7,086	N/A	767	N/A	\$8.61
24-Hour Residential Care	N/A	3.0%	N/A	\$12,289	N/A	974	N/A	\$10.81
Institutional Setting Only	N/A	1.0%	N/A	\$17,902	N/A	1,254	N/A	\$12.06
Jail/Juvenile Facility Only	N/A	3.0%	N/A	\$20,891	N/A	1,338	N/A	\$14.56
Homeless/Shelter Only	N/A	4.0%	N/A	\$15,737	N/A	1,114	N/A	\$13.86
Other	N/A	6.0%	N/A	\$16,152	N/A	1,178	N/A	\$13.81

Clients with higher GAF scores were also more likely to work (see Exhibit 6) during every quarter of 2002 than clients with low GAF scores (12.1 percent vs. 5.2 percent, respectively). Average annual earnings of the two GAF score groups were about the same, but clients with lower GAF scores worked fewer hours, which resulted in a higher average wage for clients with low GAF scores (\$12.87 vs. \$11.99).

Complicating the interpretation of employment outcomes with regard to GAF scores is the fact that only 70 percent of MHD clients in 2002 have GAF scores. Clients with GAF scores (high or low) differ from the MHD client average; they are slightly less likely to work, earn less, work fewer hours, and earn slightly lower wages than clients who do not have GAF scores. It is also worth noting that individual GAF scores depend in part on a client's employability.¹⁴

Primary Living Situations and Employment. A variety of living situations are recorded in MHD data. To simplify this analysis, they are grouped into seven categories: private residence, homeless/shelter, foster home, 24-hour residential care, institutional setting, jail/juvenile corrections facility, and other (including multiple) situations. Approximately 20 percent of the MHD records for 2002 clients contain no information on living situations. Among clients with a known living situation, more than three quarters (77 percent) lived in a private residence, and 6 percent were homeless or lived in a shelter. The remaining living situations—jail or juvenile corrections facilities, foster home, 24-hour residential care, and institutional settings—each comprised fewer than 5 percent of MHD clients (see Exhibit 7).

About 28 percent of those in private residences or who were homeless/shelter

clients were employed at least one quarter during 2002, a rate slightly higher than the 26.8 percent statewide average for MHD clients (see Exhibit 5). Clients in residential and 24-hour institutional living situations had very low rates of employment (8 percent and 2 percent, respectively). Ten percent of clients in private residences were employed during every quarter of the year (see Exhibit 6). Comparable employment rates for clients in the remaining living situations ranged from a low of 1 percent in institutional settings to 6 percent in other living situations.

Among clients who worked at least one quarter during 2002, earnings ranged from a low of \$4,187 for clients in a foster care setting to a high of \$8,870 for employed clients in institutional settings (see Exhibit 5). MHD clients who worked during every quarter in 2002 earned as little as \$7,086 on average for those in foster home settings to a high of \$20,891¹⁵ for those who had been in jail or a juvenile corrections facility (see Exhibit 6). Clients in private residences who worked every quarter averaged \$15,819 in earnings.

Of the clients who worked at least one quarter in 2002, only those living in institutions and private residences worked hours comparable to the 673 hours statewide average for MHD clients (see Exhibit 5). Homeless/shelter clients who worked at least one quarter clocked the fewest average hours at 380. Hourly wage rates ranged narrowly from \$10.40 for those in institutional settings to \$11.55 for those in private residences. Of the MHD clients who worked during every quarter, those in foster and residential care settings worked the fewest hours on average, 767 and 974, respectively (see Exhibit 6). Employed clients in the remaining living situations worked hours comparable to the 1,294 statewide average for MHD clients who worked every quarter of 2002. Hourly wages for clients who worked

¹⁴ G. Hannah, 2005, *Employment and Mental Health Service Utilization in Washington State* (draft), Seattle, WA: University of Washington.

¹⁵ Only 5 percent of clients in foster care and 3 percent of clients in a jail or juvenile corrections living situation worked during every quarter in 2002.

every quarter ranged from a low of \$8.61 for clients in foster care settings to a high of \$14.56 for those who had been in jail.

As with the GAF scores, a large number of clients with unknown living situations (19 percent) complicate the interpretation of these results (see Exhibit 7). Clients with unknown living situations tend to have better overall employment outcomes than do clients with known living situations.

Exhibit 7

Demographic and Other Characteristics of the State Population and MHD Clients, 2002

	State		MHD	
	N	%	N	%
<u>Total Adults</u>	4,431,827	100%	90,301	100%
<u>Age (as of 12/31/2002)</u>				
19-34	1,343,043	30.3%	29,417	32.6%
35-49	1,435,996	32.4%	34,109	37.8%
50-64	975,544	22.0%	16,111	17.8%
65+	677,244	15.3%	10,664	11.8%
<u>Gender</u>				
<u>Total Known</u>			89,901	100.0%
Male	2,183,102	49.3%	40,023	44.5%
Female	2,248,725	50.7%	49,878	55.5%
<u>Unknown</u>			400	
<u>Race/Ethnicity</u>				
<u>Total Known</u>			62,257	100.0%
American Indian/Alaska Native	64,659	1.5%	2,113	3.4%
African American	140,003	3.2%	4,894	7.9%
Asian	281,644	6.4%	1,954	3.1%
White	3,863,359	87.2%	53,296	85.6%
<u>Unknown</u>			28,044	
<u>Hispanic Origin</u>				
Hispanic	282,059	6.4%	3,839	4.3%
Non-Hispanic	4,149,768	93.6%	86,462	95.7%
<u>Regional Support Network (RSN)</u>				
(Clients may be listed under more than one RSN)				
Chelan/Douglas	70,996	1.6%	1,849	2.0%
Clark	256,258	5.8%	4,391	4.9%
Grays Harbor County	50,289	1.1%	1,443	1.6%
Greater Columbia	427,427	9.6%	11,140	12.3%
King	1,359,793	30.7%	22,835	25.3%
North Central	90,051	2.0%	1,840	2.0%
North Sound	721,088	16.3%	12,458	13.8%
Northeast	49,902	1.1%	1,285	1.4%
Peninsula	241,165	5.4%	5,047	5.6%
Pierce	520,275	11.7%	11,175	12.4%
Southwest	68,135	1.5%	3,274	3.6%
Spokane	311,899	7.0%	7,157	7.9%
Thurston/Mason	70,136	1.6%	3,457	3.8%
Timberlands	194,234	4.4%	3,134	3.5%

(continued on the next page)

Exhibit 7

Demographic and Other Characteristics of the State Population and MHD Clients, 2002

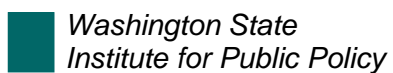
(continued)	State		MHD	
	N	%	N	%
<u>Patient Status</u>				
Ever admitted as Inpatient in 2002	N/A	N/A	9,402	10.4%
Outpatient only in 2002	N/A	N/A	80,899	89.6%
<u>Primary Diagnosis</u>				
(Clients may have more than one primary diagnosis)				
ADD	N/A	N/A	563	0.6%
Anxiety	N/A	N/A	8,885	9.8%
Autism/Development	N/A	N/A	1,237	1.4%
Bipolar	N/A	N/A	10,084	11.2%
Conduct	N/A	N/A	679	0.8%
Dementia	N/A	N/A	3,480	3.9%
Major Depression	N/A	N/A	16,055	17.8%
Personality	N/A	N/A	6,153	6.8%
Schizophrenia	N/A	N/A	11,989	13.3%
Substance Abuse	N/A	N/A	4,921	5.4%
Other Childhood	N/A	N/A	40	0.0%
Other Mental Health	N/A	N/A	8,362	9.3%
Other Mood	N/A	N/A	10,297	11.4%
Other Psychotic	N/A	N/A	3,569	4.0%
No Primary Diagnosis	N/A	N/A	14,817	16.4%
<u>Global Assessment of Functioning (GAF) Scores</u>				
<u>Total Known</u>	N/A	N/A	63,224	100.0%
GAF < 50	N/A	N/A	31,769	50.2%
GAF >= 50	N/A	N/A	31,455	49.8%
<u>Unknown</u>			27,077	
<u>Primary Living Situation</u>				
<u>Total Known</u>	N/A	N/A	73,240	100.0%
Private Residence (with or without support)	N/A	N/A	56,722	77.4%
Foster Home	N/A	N/A	490	0.7%
24-Hour Residential Care	N/A	N/A	3,402	4.6%
Institutional Setting	N/A	N/A	3,586	4.9%
Jail/Juvenile Corrections	N/A	N/A	2,674	3.7%
Homeless/Shelter	N/A	N/A	4,533	6.2%
Other (including multiple situations)	N/A	N/A	1,833	2.5%
<u>Unknown</u>	N/A	N/A	17,061	
<u>Employment (age 19–64)</u>				
<u>Total</u>	N/A	N/A	79,637	100.0%
Did Not Work at All	N/A	N/A	55,695	69.9%
Worked in 1 to 3 Quarters	N/A	N/A	15,537	19.5%
Worked in All 4 Quarters	N/A	N/A	8,405	10.6%

Sources: DSHS MHD, ESD, and OFM.

Some characteristics measures contain missing data. Missing data are not included in the calculation of the percentages in this table. (N=90,301).

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