Long-Term Outcomes of Public Mental Health Clients: Interim Report for 2002–2005

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Washington State Institute for Public Policy

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WASHINGTON STATE INSTITUTE FOR PUBLIC POLICY

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SUMMARY

In 2001, the Washington State Legislature directed the Washington State Institute for Public Policy (Institute) to conduct a longitudinal study of long-term outcomes for clients of the state's public mental health system. [1] The Mental Health Division (MHD) of the Department of Social and Health Services oversees mental health services at the state level. The Legislature requested follow-up reports at two-, five-, and ten-year intervals. The two-year follow-up report was published in February 2006.[2]

This report, documenting changes in the study cohort from 2002 to 2005, is one of several interim reports the Institute will produce. It describes client retention rates and changes in clients' mental health conditions, mental health service utilization, employment and wages, criminal justice involvement, and demographics.[3] Analyses were performed separately for adult clients (age 18 and older) and for younger clients (under age 18). Appendix A shows detailed results for all the topic areas in the report.

FINDINGS

- One-third of the original 2002 cohort remained in the MHD system in 2005.
- Remaining clients tended to be those with severe mental illnesses and low functioning abilities.
- Clients who remained were more frequently inpatients and had increasingly longer hospital stays.
- The median wage of employed clients who left MHD was at least twice as high as the median wage of those who remained.

[1] ESSB 5583, Chapter 334, Laws of 2001.
[2] W. Yen. (2006). *Long-term outcomes of public mental health clients: Two-year follow-up*. Olympia: Washington State Institute for Public Policy, Document No. 06-02-3401.
[3] The data are maintained in the MHD information system.

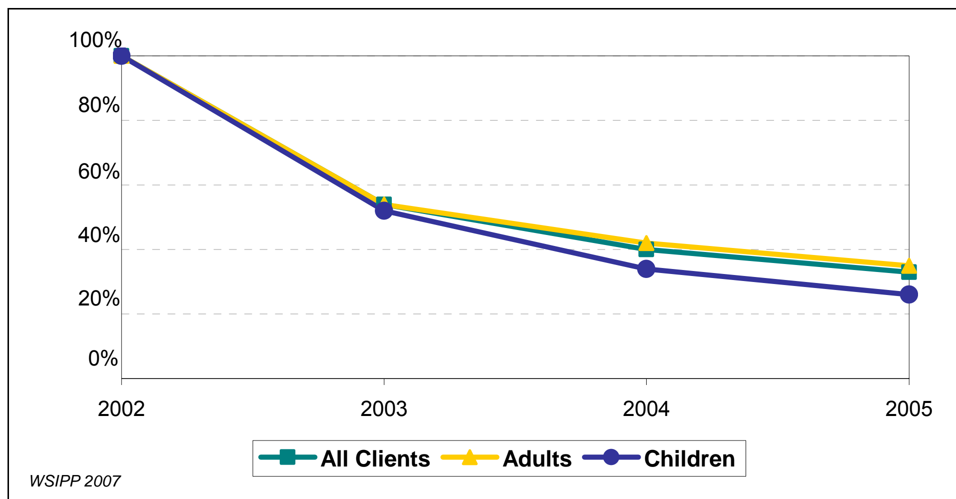
STUDY COHORT

The study cohort consists of *all clients who received any inpatient or outpatient services funded by the MHD in 2002*. In all, there were 127,494 MHD clients in 2002.[4] Of these, 72 percent were adults age 18 and older and 28 percent were children under age 18. In this report, adults and children are classified based on client age as of December 31, 2002. That is, a client who was 17 years old in 2002 is considered a child for this report, even though he or she was at least 18 in the following years.

CLIENT RETENTION

System-Wide Client Retention. **Exhibit 1** shows that a large number of the 2002 cohort (46 percent) left MHD in 2003, with 54 percent of all clients remaining. In the next two years, client exit was less dramatic, but still substantial, with an additional 14 percent exiting in 2004 and another 7 percent in 2005. Thus, by 2005, one-third (33 percent) of the original cohort remained in the MHD system.[5] Children left the system at a higher rate than adults. By 2005, while 35 percent of adults from 2002 remained in MHD, only 26 percent of children remained.

Exhibit 1
Percentage of Study Cohort Remaining in MHD, 2002–2005, By All Clients, Adults, and Children

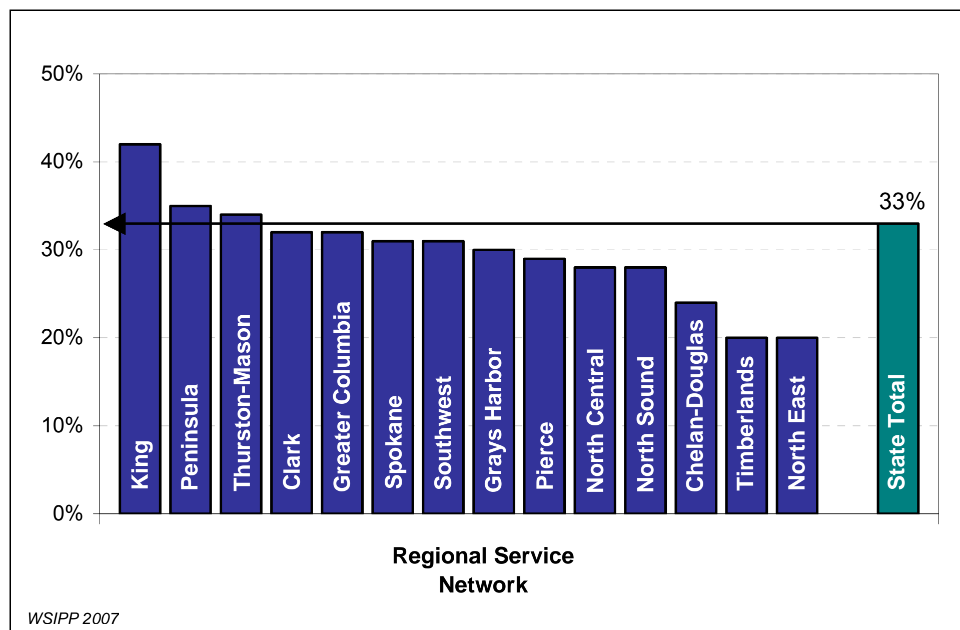


[4] This figure is slightly different from that in MHD publications for 2002 and is also different from the total 2002 clients previously reported by this study, due to MHD's recent data updates.
[5] Some clients left the system one year and returned later. These clients were counted as exits in the year they received no services and were counted as the "remaining" cohort in the year they returned to the system.

Client Retention at the Regional Support Networks. In 2002–2005, MHD contracted with 14 Regional Support Networks (RSNs) to provide mental health services to its clients. Client retention at the RSN level followed the system-wide pattern, with a large number of clients exiting in 2003 and smaller, yet substantial, numbers exiting in 2004 and 2005. However, there was a considerable variation in client retention rates at the RSN level. For example, by 2005, approximately 20 percent of the original cohort still remained in the North East and Timberlands RSNs, while 42 percent remained in the King RSN (see **Exhibit 2**). The King RSN also had the highest retention rates of adult clients and clients under age 18. In 2005, 45 percent of King RSN's adult clients and 34 percent of its clients under age 18 remained from the 2002 cohort.

Variation in client retention rates among the RSNs can be influenced by numerous factors, such as prevalence rates of severe mental disorders and/or demographic mix. A future Institute report will examine this variation in detail.

Exhibit 2
Percentage of Study Cohort Remaining in MHD by 2005, by RSN



MENTAL HEALTH CONDITIONS

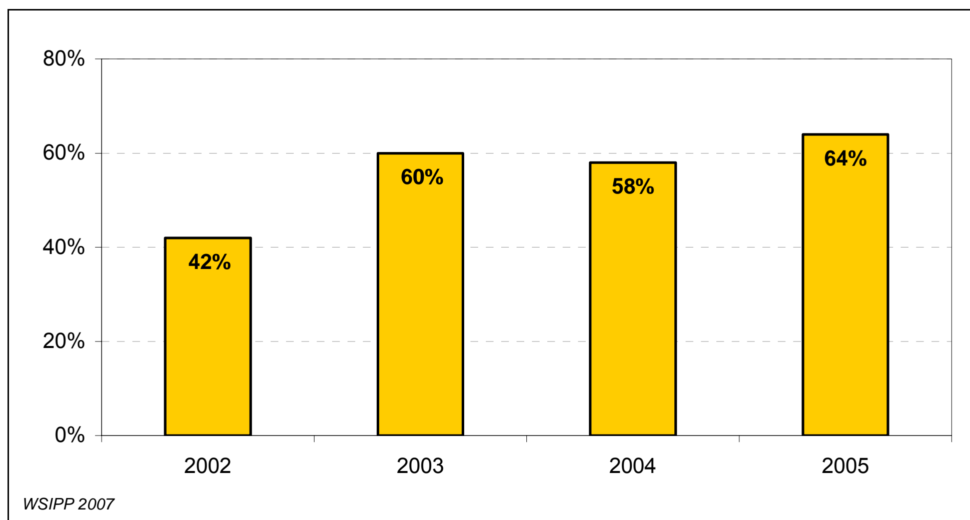
The mix of mental health conditions varied between the 2002 cohort and the remaining clients for the three subsequent years. We report two indicators related to the cohort's mental health conditions: diagnoses of mental disorders and global functioning assessment scores. Diagnoses of mental disorders are clinically based. The global assessment of functioning is a standardized assessment used to evaluate a mental health patient's overall functioning (psychological, social, vocational/educational, etc.). Different assessments are used for three age groups: adults age 18 and older, children ages 6 to 17, and children under age 6.[6] All three assessments are scored on a scale of 100 points, with low points indicating poor functioning. For ease of discussion, we refer to all three assessments as "global assessment of functioning," the term normally used for adult assessments.

[6] The adult assessment is called Global Assessment of Functioning (GAF). The assessment for children ages 6 to 17 is called Children's Global Assessment Scale (CGAS). The assessment for younger children is Assessment for Children 5 Years Old or Younger, also known as DC03.

The diagnosis and functioning assessment data have two limitations. First, data for diagnoses and functioning assessments are only available when clients receive services from MHD. As shown above, nearly half of the 2002 cohort left MHD in 2003 and, by 2005, only one-third remained in the system. This attrition means that in the long run, diagnosis and functioning assessment data are only applicable for a portion of the original cohort. Second, a significant number of clients have undocumented diagnoses and/or functioning assessment scores. It is not clear from the MHD information system whether these clients required no diagnoses or assessment, or whether the information was not collected, or not properly reported. The unknown data may skew the results in unpredictable ways.

Mental Disorder Diagnoses. According to an MHD method that ranks mental health disorders by severity, the three most severe disorders are schizophrenia, bipolar, and major depression.[7] **Exhibit 3** shows that together these three disorders were diagnosed in 42 percent of the study cohort's adult clients in 2002. Proportions of adult clients with these three diagnoses increased in 2003 through 2005 among those continuing to receive MHD services. Among all adult clients receiving MHD services in 2005, nearly two-thirds (64 percent) had one of these three diagnoses. This increase in the proportion of adult clients with these severe disorders does not necessarily suggest worsening conditions among those remaining in MHD, but rather adult clients with these disorders in the baseline year were more likely to remain.

Exhibit 3
Percentage of Adult Clients With Most Severe Mental Disorders: 2002–2005

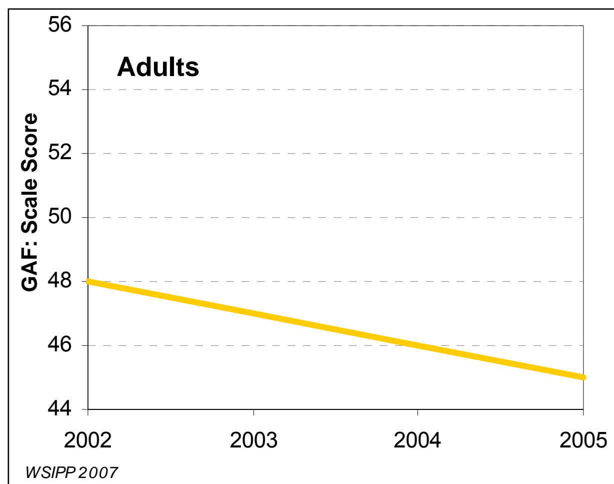


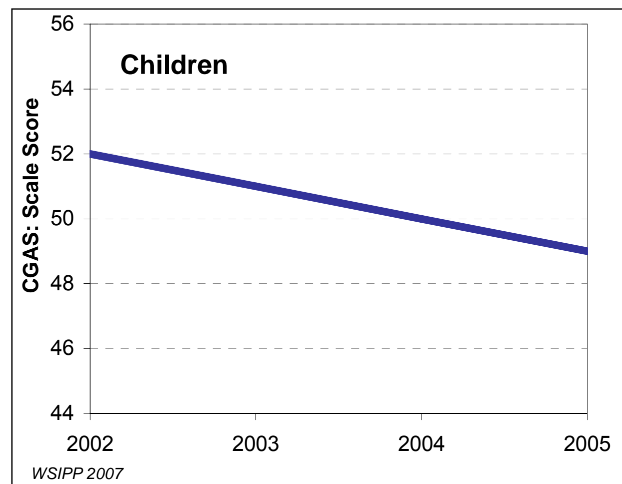
Note: Percentages may differ slightly from those in Appendix A due to rounding.

[7] This method uses a precedence table to rank mental health disorders by severity. When a patient is diagnosed with more than one concurrent disorder in a given month, the more severe disorder is designated.

Global Assessment of Functioning. **Exhibit 4** shows that in 2002, adults' average annual functioning assessment score was 48; a GAF score below 50 suggests serious functioning symptoms. In 2002, children's average annual functioning score was 52; a CGAF score between 60 and 51 indicates variable functioning symptoms, and a score between 50 and 41 indicates a moderate degree of interference in functioning. Adults and children who continued receiving MHD services between 2003 and 2005 had lowered scores, by one point each year. Again, this trend does not necessarily suggest that clients remaining in MHD were getting worse, but rather it supports the view that clients who continued receiving MHD services were more likely to have had serious mental health conditions (and were thus more likely to have lower functioning scores) than clients who left MHD.

Exhibit 4
Average Annual Scores of Global Assessment of Functioning
Adults and Children: 2002–2005





Note: Global Assessment of Functioning (GAF) scale of 50 to 41 indicates serious symptoms (e.g., suicidal ideation, severe obsessional rituals, frequent shoplifting) or any serious impairment in social, occupational, or school functioning (e.g., no friends, unable to keep a job); a scale of 60 to 51 indicates moderate symptoms (e.g., flat affect and circumstantial speech, occasional panic attacks) or moderate difficulty in social, occupational, or school functioning (e.g., few friends, conflicts with peers or co-workers). Source: American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders, 4th ed.* Washington D.C.: Author, p. 32.

Note: Children's Global Assessment Scale (CGAS) of 60 to 51 indicates variable functioning with sporadic difficulties or symptoms in several but not all social areas; disturbance would be apparent to those who encounter the child in a dysfunctional setting or time but not to those who see the child in other settings; a score of 50 to 41 indicates moderate degree of interference in functioning in most social areas or severe impairment of functioning in one area (i.e., suicidal preoccupations and ruminations, school refusal and other forms of anxiety, obsessive rituals, major conversion symptoms, frequent anxiety attacks, poor or inappropriate social skills, frequent episodes of aggressive or other antisocial behavior with some preservation of meaningful social relationships. Source: D. Shaffer, M.S. Gould, J. Brasic, P. Ambrosini, P. Fisher, H. Bird, et al. (1983). A children's global assessment scale (CGAS). *Archives of General Psychiatry, 40*: 1228-1231.

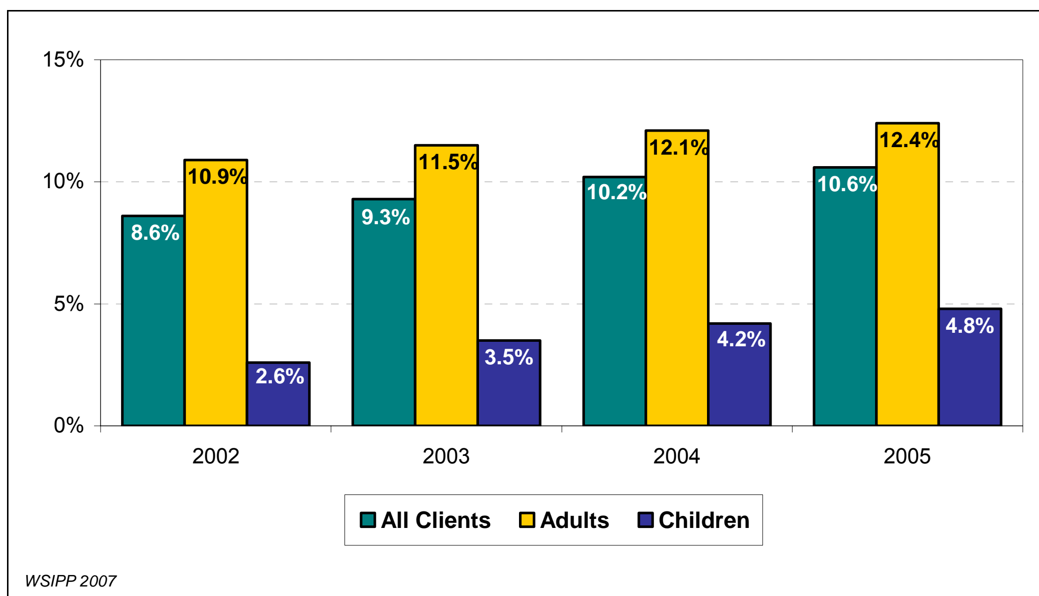
PUBLIC MENTAL HEALTH SERVICE UTILIZATION

Hospital Inpatient Service. From 2002 to 2005, the proportion of cohort clients who stayed in a hospital for at least one day increased from 8.6 to 10.6 percent among those receiving MHD services (see **Exhibit 5**). The average hospitalization time among those with any hospital stay went up as well, from 56 to 90 days. The increase in the proportion of inpatient clients was largely due to an increase in admissions to state-run hospitals. Among clients admitted as inpatients from 2002 to 2005, the proportion of admissions to state-run hospitals increased from 54 percent to 74 percent, while the proportions of admissions to other inpatient facilities remained relatively unchanged.[8] Again, this trend does not necessarily suggest worsening health conditions among clients continuing to receive MHD services; rather it may indicate that clients with serious disorders in 2002 are more likely to remain in the system.

For adult clients, the proportion with a hospital stay of at least one day increased from 10.9 percent in 2002 to 12.4 percent in 2005. The average hospital length of stay among these adult clients increased each year, from 57 days in 2002 to 93 days in 2005.

For clients under age 18, the proportion using inpatient services increased nearly two-fold, from 2.6 percent in 2002 to 4.8 percent in 2005, although the proportions in both years were small in comparison to adult clients. The average length of stay among children with hospital stays increased from 54 days in 2002 to 71 days in 2003. However, in the next two years, the average length of stay remained fairly constant (70 days in 2004 and 68 days in 2005).

Exhibit 5
Percentage of Clients With Hospital Stay: 2002–2005



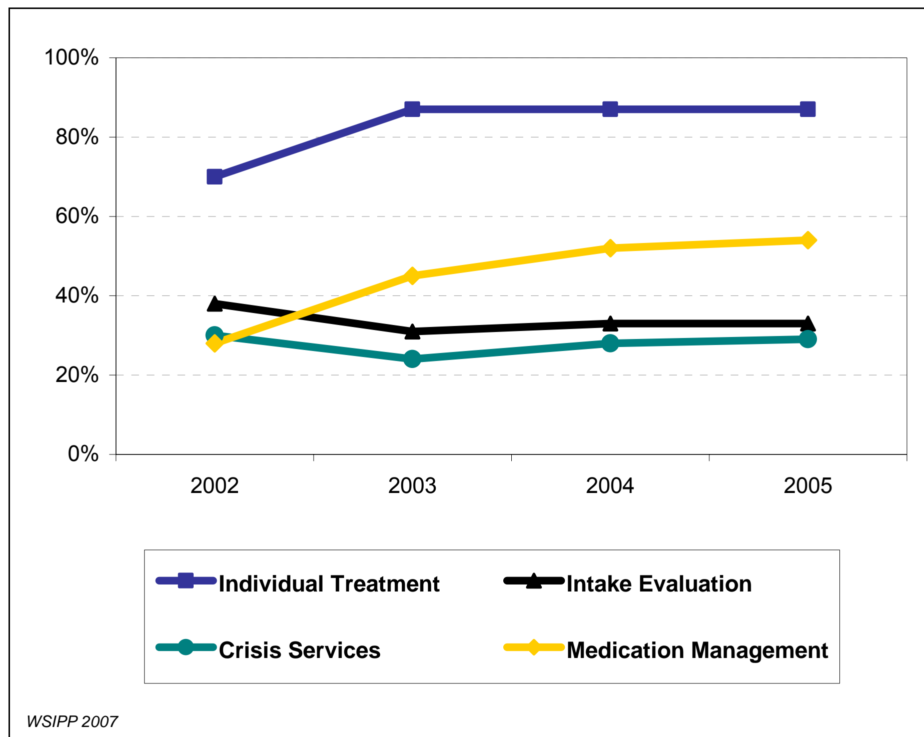
[8] A client can be in more than one inpatient facility in a given year. Therefore, the sum of clients at all inpatient facilities can total more than 100 percent of all inpatients.

Outpatient Service. Over 90 percent of the cohort receiving MHD services each year used outpatient services.[9] These clients used an average of 23 hours of outpatient services in 2002. The average hours among clients continuing to receive services rose to 36 in 2003 and held at this level for the next two years.

MHD categorizes its outpatient services in 20 state plan modalities.[10] Four services were used more frequently by the study cohort: individual treatment, intake evaluation, crisis services, and medication management. The utilization rate for each of these services ranged from 24 percent to 87 percent among the study cohort receiving MHD services in any of the four years reviewed (2002–2005). **Exhibit 6** shows an increase from 2002 to 2003 in the proportion of the overall clients using individual treatment and medication management while the proportions using intake evaluation and crisis services decreased. However, between 2003 and 2005, utilization rates for all four services stabilized. Individual treatment remained the most frequently used service in each of the four years. Medication management rose to the second most frequently used service in 2003 from the fourth most frequently used service in 2002.

These four outpatient services were prevalent for both adults and children between 2002 and 2005 (see Appendix A). For children, family treatment was also frequently used, behind only individual treatment and intake evaluation.

Exhibit 6
Percentage of MHD Clients (Adults and Children)
Using Select State Plan Modality Services: 2002–2005



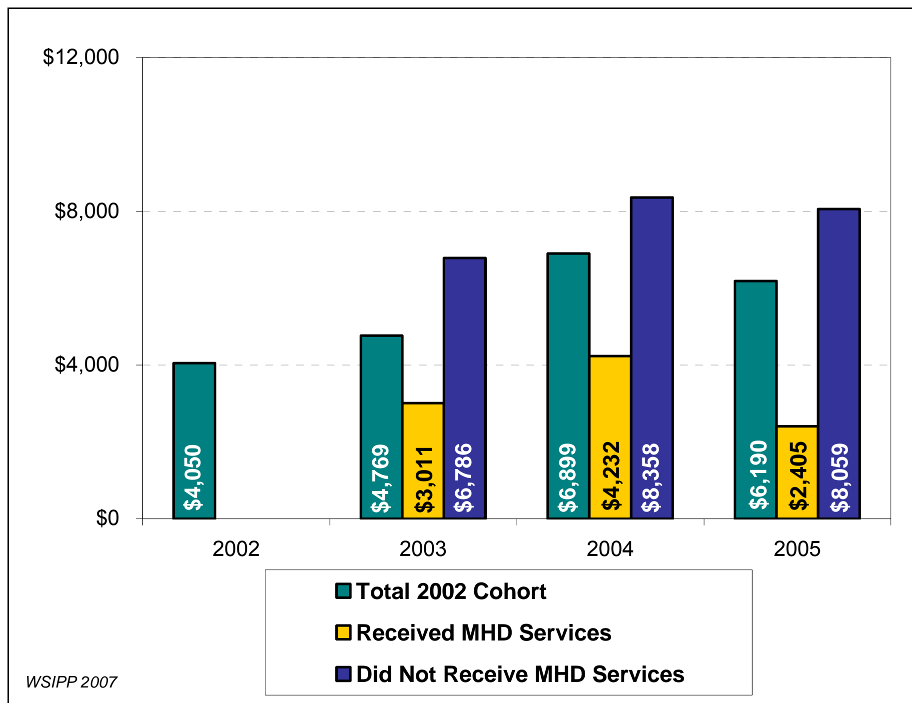
[9] Including some classified as inpatient clients in this report.
[10] For a complete list of state plan modalities provided by MHD, see Appendix A.

Adult Clients' Employment and Wage Earnings

Approximately 26 percent of the study cohort's adult clients were employed at some point during 2002. This employment rate fell to 24 percent in 2003 and 23 percent in both 2004 and 2005. Adult clients who continued to receive MHD services had an employment rate about 11 to 12 percentage points lower than adult clients not receiving services in the years between 2003 and 2005; those who received services were employed at a rate of 16 to 19 percent, compared with 28 to 30 percent for clients who did not receive services.

Exhibit 7 shows the median wage earnings between 2002 and 2005 by three categories: all employed adults, employed adults receiving MHD services, and employed adults not receiving MHD services (i.e., adults who left MHD). For all employed adults, the median earnings were $4,050 in 2002. They increased by 18 percent to $4,770 in 2003 and showed an even larger annual increase of 45 percent to $6,900 in 2004, before declining to $6,190 in 2005. Earnings of those not receiving MHD services were at least twice as high in 2003 and 2004—and more than three times as high in 2005—as earnings of those receiving MHD services. A separate Institute report shows that MHD clients had considerably lower employment rates and earnings compared with Washington State's general population.[11]

Exhibit 7
Median Wage Earnings of Employed Adult Clients



Note: Earnings for 2003–2005 are inflation-adjusted to 2002 dollars.

[11] J. Mayfield. (2005). *Employment characteristics of clients receiving public mental health services.* Olympia: Washington State Institute for Public Policy, Document No. 05-10-3902.

National research documents this same pattern of low employment rates among persons with mental disorders. One recent study shows unemployment rates are three to five times higher among persons with mental disorders than among those with no disorders.[12] National research further identifies a strong relationship between mental illness and work-related disability, affecting vocational preparation, work entry, and continued employment. According to recent literature, neither illness characteristics nor client characteristics fully explain work disability among persons with psychiatric disability. Central to employment barriers among persons with mental illness are workplace characteristics such as stigma associated with mental illness, lack of accommodations, and labor market characteristics (e.g., general population employment rates and demand for specific types of jobs).[13]

ADULT CLIENTS' CRIMINAL JUSTICE INVOLVEMENT

In reviewing MHD clients' criminal justice involvement, we focused on felony convictions committed by adult clients in three broad categories: violent, drug, and other felonies.[14] The incidence rates of all three categories show a decreasing trend among the entire adult cohort. In 2002, "other" felony had the highest rate at 1.5 percent followed by violent felony (1.4 percent), and drug felony (1.1 percent). By 2005, the annual felony conviction rates had declined to 0.8 percent for other felony, and to 0.6 percent each for violent felony and drug felony. Clients who continued receiving MHD services had higher felony conviction rates than clients who left MHD, although both client groups showed an overall decline in felony convictions.

A previous Institute study reports that life-time felony conviction rates were considerably higher among MHD clients than those of the general population.[15] An additional analysis comparing this MHD cohort with a general population cohort in annual felony conviction rates over time would be of value.

MORTALITY

The overall death rate among the 2002 client cohort was 1.7 percent in 2002. It rose slightly to 1.8 percent in 2003, then dropped below the 2002 level to 1.5 percent in 2004 (the last year data were available for this analysis). The death rates of MHD clients are higher than the death rates of Washington State's general population. According to the Department of Health, the general population's death rates for 2002 through 2004 are 0.79 percent, 0.78 percent, and 0.74 percent, respectively.[16]

AGE, GENDER, AND RACE/ETHNICITY

The age distribution shows a gradual increase in proportions of adults among the study cohort that continued receiving MHD services, from 72 percent in 2002 to 77 percent in 2005. No change in the gender distribution was observed. The proportion of female clients remained at about 52 percent from 2002 to 2005 for clients who continued receiving MHD services. Over this period, race and ethnicity distributions similarly showed little change.

[12] R. Sturm, C.R. Gresenz, R.L. Pacula, & K.B. Wells. (1999). Labor force participation by persons with mental illness. *Psychiatric Services*, *50*(11): 1407.
[13] D.D. McAlpine & L. Warner. (2002). *Barriers to employment among persons with mental illness: A review of the literature.* New Brunswick: Center for Research on the Organization and Financing of Care for the Severely Mentally Ill, Institute for Health, Health Care Policy and Aging Research, Rutgers University.
[14] These felony categories are coded according to the degree of severity. The most serious are violent offenses, followed by "other" offenses, and then by drug offenses. For details of this coding scheme, see W. Yen. (2005). *Criminal justice involvement among clients receiving public mental health services.* Olympia: Washington State Institute for Public Policy, Document No. 05-10-3901.
[15] Ibid.
[16] http://www.doh.wa.gov/ehsphl/chs/chs-data/death/download/deatha1.xls.

NEXT STEPS

The Institute will publish another interim report in 2007 and the Legislature-directed 5-year follow-up report in 2008. Also, based on recent meetings with legislative staff and agency researchers, additional Institute publications will focus on areas of particular interest, including:

Early 2007

- Caseloads of long-term MHD clients and cycling clients (i.e. clients who made repeated use of MHD services).
- Characteristics and factors associated with long-term use of MHD services.
- Factors associated with long-term use of MHD services among Medicaid beneficiaries.

2007–2008

- Demographic and diagnostic characteristics of MHD clients and whether these characteristics affect service utilization and ability to recover from mental health conditions.
- Difference in cycling and non-cycling clients in physical health-related quality of life.
- Use of MHD services and all other public health services.
- Service utilization and self-reported functioning, satisfaction, and qualify of life.
- Relationship between self-reported service satisfaction by clients and their ability to recover from mental health conditions.

APPENDIX A
CLIENT CHARACTERISTICS AND OUTCOME CHANGES: 2002–2005

TOTAL COHORT CLIENTS

	2002	2003			2004			2005		
		All	In MHD	Not in MHD	All	In MHD	Not in MHD	All	In MHD	Not in MHD
Total Clients										
Number of Clients	127,494	125,264	68,350	56,914	122,970	50,991	71,979	121,072	41,665	79,407
Percent of Original Cohort Receiving MHD Services										
Received MHD Services	100%	54%			40%			33%		
Percent of Original Cohort at RSN Receiving MHD Services										
Chelan-Douglas	100%		47%			31%			24%	
Clark	100%		53%			40%			32%	
Southwest	100%		55%			40%			31%	
Greater Columbia	100%		55%			42%			32%	
Grays Harbor	100%		53%			39%			30%	
King	100%		64%			50%			42%	
North Central	100%		54%			36%			28%	
North East	100%		49%			25%			20%	
North Sound	100%		48%			35%			28%	
Peninsula	100%		54%			42%			35%	
Pierce	100%		46%			35%			29%	
Spokane	100%		56%			36%			31%	
Timberlands	100%		44%			31%			20%	
Thurston-Mason	100%		51%			39%			34%	
Mental Health Disorder Diagnoses (percentages calculated using clients with diagnosis data)										
Schizophrenia	10%		17%			18%			21%	
Bipolar	8%		12%			13%			14%	
Major Depression	14%		17%			16%			18%	
Other	46%		43%			32%			29%	
Diagnosis Unknown	22%		10%			20%			18%	
Global Functioning Assessment Score (average score calculated using clients with functioning assessment data)										
Annual Average Score	49		48			47			46	
Inpatient/Outpatient										
Outpatient	91.4%		90.7%			89.8%			89.4%	
Inpatient	8.6%		9.3%			10.2%			10.6%	
Inpatient Services - Days in Hospital (calculated using inpatient clients only)										
Average Days in Hospital	56		78			85			90	
Inpatient Services - Hospital Facilities (percentages reflect cross-listing among these facilities)										
Community Hospital	5%		6%			6%			6%	
State Hospital (SHIP & NFOR)	5%		6%			7%			8%	
E & T	1%		2%			2%			2%	
CLIP	0%		0%			0%			0%	
Outpatient Services - Hours of Services										
Average Outpatient Hours	23		36			35			35	
Outpatient Services - State Plan Modality (percentages reflect cross-listing among the plans)										
Individual treatment	70%		87%			87%			87%	
Intake evaluation	38%		31%			33%			33%	
Crisis services	30%		24%			28%			29%	
Medication management	28%		45%			52%			54%	
Family treatment	14%		18%			14%			14%	
Group treatment	9%		15%			17%			16%	
Medication monitoring	5%		10%			16%			11%	
Day support	3%		4%			5%			5%	
Rehab case management	1%		2%			2%			2%	
Peer support	1%		2%			2%			2%	
High intensity treatment	1%		1%			0%			0%	
Services in residential setting	1%		1%			0%			0%	
Supported employment	1%		2%			2%			3%	
Stabilization services	1%		1%			0%			0%	
Respite	0%		0%			0%			0%	
Therapeutic psychoeducation	0%		0%			2%			1%	
Psychological assessment	0%		0%			0%			0%	
Clubhouse	0%		0%			0%			0%	
Freestanding E&T	0%		0%			0%			0%	
Special Pop evaluation	0%		0%			0%			0%	

TOTAL COHORT CLIENTS, *continued*

	2002	2003			2004			2005		
		All	In MHD	Not in MHD	All	In MHD	Not in MHD	All	In MHD	Not in MHD
Age (as of December 31, 2002)										
Adults	72%	71%	73%	70%	71%	76%	67%	70%	77%	67%
Children	28%	29%	27%	30%	29%	24%	33%	30%	23%	33%
Gender										
Female	52%	52%	52%	51%	52%	52%	52%	52%	52%	52%
Male	48%	48%	48%	49%	48%	48%	48%	48%	48%	48%
Race/Ethnicity										
Hispanic	8%	8%	7%	9%	8%	6%	9%	8%	6%	9%
Non-Hispanic										
White	71%	71%	72%	69%	71%	73%	69%	71%	73%	69%
Black	7%	7%	7%	6%	7%	8%	6%	7%	8%	6%
Native American	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Asian	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Other	9%	9%	8%	11%	9%	8%	10%	9%	8%	10%
Mortality										
Deaths	1.7%	1.8%	1.9%	1.8%	1.5%	1.7%	1.4%			

Data Sources: Mental Health Division – Service Utilization File, Department of Health – death records

ADULTS

	2002	2003			2004			2005		
Clients Age 18 and Older		**All**	**In MHD**	**Not in MHD**	**All**	**In MHD**	**Not in MHD**	**All**	**In MHD**	**Not in MHD**
Total Adult Clients	91,586	89,367	49,598	39,769	87,089	38,732	48,357	85,217	32,217	53,000
Percent of Original Cohort Receiving MHD Services										
Received MHD Services	100%	54%			42%			35%		
Regional Support Network (RSN) of Services (sum of RSN clients may be greater than total MHD clients due to cross-listing among RSNs)										
Chelan-Douglas	100%		47%			32%			24%	
Clark	100%		56%			45%			36%	
Southwest	100%		55%			41%			32%	
Greater Columbia	100%		55%			44%			33%	
Grays Harbor	100%		53%			40%			34%	
King	100%		64%			53%			45%	
North Central	100%		57%			41%			33%	
North East	100%		50%			26%			22%	
North Sound	100%		48%			37%			30%	
Peninsula	100%		55%			45%			37%	
Pierce	100%		47%			38%			32%	
Spokane	100%		56%			36%			32%	
Timberlands	100%		43%			30%			21%	
Thurston-Mason	100%		50%			41%			36%	
Mental Health Disorder Diagnoses										
Schizophrenia	13%		23%			24%			27%	
Bipolar	11%		16%			15%			16%	
Major Depression	18%		21%			19%			20%	
Other	33%		29%			22%			19%	
Diagnosis Unknown	25%		11%			20%			18%	
Global Functioning Assessment Score (average score calculated using clients with functioning assessment data)										
Annual Average Score	48		47			46			45	
Inpatient/Outpatient										
Outpatient	89.1%		88.5%			87.9%			87.7%	
Inpatient	10.9%		11.5%			12.1%			12.4%	
Inpatient Services - Days in Hospital (calculated using inpatient clients only)										
Average Days in Hospital	57		78			86			93	
Inpatient Services - Hospital Facilities (percentages reflect cross-listing among these hospital facilities)										
Community Hospital	6%		7%			7%			7%	
State Hospital (SHIP & NFOR)	6%		8%			9%			10%	
E & T	2%		2%			2%			2%	
CLIP	0%		0%			0%			0%	
Outpatient Services - Hours of Services										
Average Outpatient Hours	24		38			37			36	
Outpatient Services - State Plan Modality (sum of percentages may be greater than 100 due to cross-listing)										
Individual treatment	67%		85%			86%			86%	
Intake evaluation	33%		29%			29%			30%	
Crisis services	35%		28%			31%			31%	
Medication management	32%		52%			57%			59%	
Family treatment	6%		8%			5%			6%	
Group treatment	10%		16%			18%			19%	
Medication monitoring	6%		12%			18%			13%	
Day support	3%		4%			6%			6%	
Rehab case management	2%		2%			3%			2%	
Peer support	2%		3%			2%			2%	
High intensity treatment	1%		4%			0%			0%	
Services in residential setting	1%		2%			0%			0%	
Supported employment	1%		3%			3%			3%	
Stabilization services	1%		2%			0%			0%	
Respite	0%		0%			0%			0%	
Therapeutic psychoeducation	0%		0%			1%			1%	
Psychological assessment	0%		0%			0%			0%	
Clubhouse	0%		0%			0%			0%	
Freestanding E&T	0%		0%			0%			0%	
Special Pop evaluation	0%		0%			0%			0%	

ADULTS, *continued*

	2002	2003			2004			2005		
		All	In MHD	Not in MHD	All	In MHD	Not in MHD	All	In MHD	Not in MHD
Employment of Adult Clients										
Not Employed	74%	76%	81%	70%	77%	83%	72%	77%	84%	72%
Employed	26%	24%	19%	30%	23%	17%	28%	23%	16%	28%
Wage Earnings of Adult Clients (2002 constant value)										
Average Wage	$ 8,382	$ 9,080	$ 6,441	$ 11,204	$ 10,905	$ 7,644	$ 12,272	$ 10,504	$ 5,503	$ 12,098
Median Wage	$ 4,050	$ 4,768	$ 3,011	$ 6,786	$ 6,899	$ 4,232	$ 8,358	$ 6,190	$ 2,405	$ 8,059
Conviction of Felonies										
Violent Felony	1.4%	0.8%	1.0%	0.6%	0.7%	1.0%	0.5%	0.6%	0.9%	0.4%
Drug Felony	1.1%	0.8%	0.9%	0.8%	0.7%	0.8%	0.7%	0.6%	0.8%	0.6%
Other Felony	1.5%	1.1%	1.1%	1.1%	1.0%	1.2%	0.9%	0.8%	1.0%	0.7%
No Convictions	95.9%	97.2%	97.0%	97.5%	97.5%	97.1%	97.9%	97.9%	97.4%	98.3%
Gender										
Female	55%	55%	57%	54%	56%	56%	55%	55%	56%	55%
Male	45%	45%	43%	46%	44%	44%	45%	45%	44%	45%
Race/Ethnicity										
Hispanic	6%	6%	5%	7%	6%	5%	7%	6%	4%	7%
Non-Hispanic										
White	74%	74%	76%	71%	73%	76%	71%	73%	75%	72%
Black	6%	6%	7%	6%	7%	7%	6%	7%	8%	6%
Native American	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Asian	2%	2%	3%	2%	2%	3%	2%	2%	3%	2%
Other	9%	9%	7%	12%	9%	7%	11%	9%	7%	11%
Mortality										
Deaths	2.4%	2.5%	2.6%	2.5%	2.1%	2.3%	2.1%			

Data Sources: Mental Health Division – Service Utilization File, Department of Health – death records, Washington State Institute for Public Policy – Criminal Justice System Database (integrated system with data originating from Department of Corrections, Washington State Patrol, and the Administrative Office of the Courts), and Department of Employment Security – Unemployment Insurance File

CHILDREN

Clients Under Age 18	2002	2003			2004			2005		
		All	In MHD	Not in MHD	All	In MHD	Not in MHD	All	In MHD	Not in MHD
Total Clients Under Age 18	35,892	35,881	18,749	17,132	35,866	12,254	23,612	35,840	9,445	26,395
Percent of Original Cohort Receiving MHD Services										
Received MHD Services	100%	52%			34%			26%		
Regional Support Network (RSN) of Services (sum of RSN clients may be greater than total MHD clients due to cross-listing among RSNs)										
Chelan-Douglas	100%		48%			30%			23%	
Clark	100%		46%			31%			25%	
Southwest	100%		53%			38%			29%	
Greater Columbia	100%		54%			37%			29%	
Grays Harbor	100%		54%			35%			24%	
King	100%		66%			44%			34%	
North Central	100%		48%			26%			19%	
North East	100%		45%			21%			16%	
North Sound	100%		47%			30%			22%	
Peninsula	100%		51%			32%			28%	
Pierce	100%		44%			26%			21%	
Spokane	100%		54%			36%			29%	
Timberlands	100%		46%			32%			19%	
Thurston-Mason	100%		53%			34%			27%	
Mental Health Disorder Diagnoses										
Schizophrenia	0%		1%			1%			1%	
Bipolar	2%		3%			5%			7%	
Major Depression	5%		7%			8%			9%	
Other	79%		81%			66%			65%	
Diagnosis Unknown	14%		9%			21%			19%	
Global Functioning Assessment Score (average score calculated using clients with functioning assessment data)										
Annual Average Score	52		51			50			49	
Inpatient/Outpatient										
Outpatient	97.4%		96.6%			95.8%			95.2%	
Inpatient	2.6%		3.5%			4.2%			4.8%	
Inpatient Services - Days in Hospital (calculated using inpatient clients only)										
Average Days in Hospital	54		71			70			68	
Inpatient Services - Hospital Facilities (percentages are calculated using inpatient clients only and may add to more than 100 due to cross-listing)										
Community Hospital	2%		2%			3%			3%	
State Hospital (SHIP & NFOR)	1%		1%			2%			2%	
E & T	0%		0%			1%			1%	
CLIP	0%		0%			1%			0%	
Outpatient Services - Hours of Services										
Average Outpatient Hours	21		30			30			29	
Outpatient Services - State Plan Modality (sum of percentages may be greater than 100 due to cross-listing)										
Individual treatment	78%		91%			91%			89%	
Intake evaluation	50%		36%			44%			47%	
Crisis services	16%		14%			18%			21%	
Medication management	15%		28%			34%			37%	
Family treatment	35%		44%			43%			41%	
Group treatment	7%		11%			12%			10%	
Medication monitoring	2%		5%			10%			7%	
Day support	2%		2%			2%			2%	
Rehab case management	0%		0%			0%			0%	
Peer support	0%		0%			0%			0%	
High intensity treatment	2%		1%			2%			0%	
Services in residential setting	0%		0%			0%			0%	
Supported employment	0%		0%			0%			1%	
Stabilization services	0%		0%			0%			0%	
Respite	0%		1%			0%			0%	
Therapeutic psychoeducation	0%		0%			2%			2%	
Psychological assessment	0%		0%			1%			1%	
Clubhouse	0%		0%			0%			0%	
Freestanding E&T	0%		0%			0%			0%	
Special Pop evaluation	0%		0%			0%			0%	

CHILDREN, *continued*

	2002	2003			2004			2005		
		All	In MHD	Not in MHD	All	In MHD	Not in MHD	All	In MHD	Not in MHD
Gender										
Female	43%	43%	41%	45%	43%	39%	45%	43%	39%	44%
Male	57%	57%	59%	55%	57%	61%	55%	57%	61%	56%
Race/Ethnicity										
Hispanic	13%	13%	13%	13%	13%	11%	14%	13%	11%	14%
Non-Hispanic										
White	65%	65%	64%	65%	65%	65%	65%	65%	65%	65%
Black	8%	8%	9%	7%	8%	9%	7%	8%	9%	7%
Native American	4%	4%	4%	4%	4%	3%	4%	4%	3%	4%
Asian	2%	2%	1%	2%	1%	1%	2%	2%	1%	2%
Other	9%	9%	9%	9%	9%	10%	9%	10%	10%	9%
Mortality (deaths per 1,000 clients)										
Deaths	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%			

Data Sources: Mental Health Division – Service Utilization File, Department of Health – death records

APPENDIX B
LONG-TERM OUTCOMES OF PUBLIC MENTAL HEALTH CLIENTS: INSTITUTE PUBLICATIONS

2007

Yen, Wei (2007). *Long-term and cycling clients: Washington State's public mental health services*. Olympia: Washington State Institute for Public Policy, Document No. 07-03-3401.

Yen, Wei (2007). *Long-term outcomes of public mental health clients: Interim report for 2002–2005*. Olympia: Washington State Institute for Public Policy, Document No. 07-03-3402.

2006

Yen, Wei (2006). *Long-term outcomes of public mental health clients: Two-year follow-up*. Olympia: Washington State Institute for Public Policy, Document No. 06-02-3401.

2005

Yen, Wei (2005). *Criminal justice involvement among clients receiving public mental health services*. Olympia: Washington State Institute for Public Policy, Document No. 05-10-3901.

Mayfield, Jim (2005). *Employment characteristics of clients receiving public mental health services*. Olympia: Washington State Institute for Public Policy, Document No. 05-10-3902.

Yen, Wei and Mayfield, Jim (2005). *Long-term outcomes of public mental health clients: Additional baseline characteristics*. Olympia: Washington State Institute for Public Policy, Document No. 05-03-3401.

2004

Lerch, Steve (2004). *Long-term outcomes of public mental health clients: Preliminary report.* Olympia: Washington State Institute for Public Policy, Document No. 04-02-3401.

These reports are available on the Institute's website at www.wsipp.wa.gov.

This report was prepared by Wei Yen. For future questions on this report or on the Long-Term Outcomes of Public Mental Health Clients *project, contact Mason Burley at (360) 528-1645 or mason@wsipp.wa.gov.*