Access to Atypical Antipsychotic Medications:
Program Characteristics and Participant Profiles

Polly Phipps, Ph.D.
Bill Luchansky, Ph.D.
Mina Halpern

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Polly Phipps, Ph.D.
Washington State Institute for Public Policy

Bill Luchansky, Ph.D.
Northwest Crime and Social Research, Inc.

Mina Halpern
Washington State Institute for Public Policy

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Washington State Institute for Public Policy
110 East Fifth Avenue, Suite 214
Post Office Box 40999
Olympia, WA 98504-0999
Telephone: (360) 586-2677
FAX: (360) 586-2793
URL: http://www.wsipp.wa.gov
Document No. 02-01-1902

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CONTENTS

The authors wish to thank the following persons for their contributions to this report: Judy Hall, Department of Social and Health Services, Mental Health Division; Ted Lamb, Department of Social and Health Services, Research and Data Analysis Division; Ellen Perry, Harborview Mental Health Services; Debra Sbrenick, Pierce County Regional Support Network; Bruce Stegner, Washington Institute for Mental Illness Research and Training, WSU.

EXECUTIVE SUMMARY

Schizophrenia and other psychiatric and neurological disorders are now being treated with new medications commonly called "atypical antipsychotics." For many people, the new medications are more effective and provide a better chance of living productively in society. While the new medications are much more expensive than their predecessors, research from clinical trials suggests that they can be cost-effective (Essock et al., 2000).

For a number of reasons, including low income and medical assistance gaps, access to atypical antipsychotic medications can be problematic. In order to address these issues, the 2000 Legislature passed Second Substitute House Bill 2663 (2SHB 2663),[1] providing for the distribution of atypical antipsychotic medications to underserved populations who present a risk of harm to themselves and the community. To assess the effectiveness of 2SHB 2663, the Legislature mandated a study to be conducted by the Washington State Institute for Public Policy (Institute).

Two organizations bid for and were awarded contracts to distribute the medications through a Department of Social and Health Services (DSHS) competitive bidding process: Harborview Mental Health Services (Harborview) in King County and Pierce County Regional Support Network (Pierce). Pierce began enrolling individuals into its program in November 2000, and Harborview began enrolling individuals in January 2001.

This initial report provides descriptive statistics on three issues: the programs, the participants, and preliminary access and funding results for individuals entering the program prior to June 30, 2001.[2] Program characteristics include enrollment and length of time in the program, while participant characteristics include demographic, mental health, and criminal history background. The preliminary results include the program's effect on participants' access to atypical antipsychotic medications and whether participants found a stable funding source at the time they left the program.

Program Characteristics

The data show that the Harborview and Pierce programs are operating in accordance with legislative requirements. While enrollment is lower than expected, participants meet program eligibility and other legislative requirements: they have a serious mental illness, low income, and no medical coverage. A substantial proportion of those enrolled meet the target population definitions. Both programs are providing temporary access to the medications, in accordance with the transitional funding mandate.

[1] Enacted March 30, 2000, Chapter 217, Laws of 2000.
[2] The cut-off date of June 30, 2001, was necessary in order to acquire the administrative data for this report.

Specific program findings include the following:

- In the first six to eight months of program operation, Harborview and Pierce enrolled approximately 13 and 7 participants a month, respectively.
- Approximately 27 percent of Harborview and 58 percent of Pierce participants fell into the legislative target population of individuals transitioning out of correctional facilities or recently receiving treatment under involuntary civil commitment laws.
- The majority of participants in both sites received medications for less than 60 days, consistent with the legislative mandate of transitional funding.

Participant Profile

The data indicate that participants are severely mentally ill; most have a major psychotic or mood disorder and very low psychosocial functioning. The majority of participants are men between 31 and 45 years of age who have few economic resources. About one-third of participants have an adult felony conviction. Many participants, particularly in Pierce, have received public mental health system services, but few have received continuous outpatient or medication management treatment.

Specific participant characteristic findings include the following:

- Over 50 percent of Harborview participants were homeless, as were 10 percent of Pierce participants.
- Nearly half the participants at Harborview had a co-occurring substance disorder, as did 16 percent of Pierce participants.
- Most program participants reported public assistance or no income source at program entry.
- Nearly two-thirds of participants had no wages recorded in Employment Security records in the four quarters prior to program enrollment.
- Approximately 31 percent of Harborview and 34 percent of Pierce participants had an adult felony conviction.
- The majority of participants had not received medication management treatment in the public mental health system in the year prior to program entry.
- Approximately 5 percent of Harborview and 26 percent of Pierce clients received outpatient mental health services in each year from 1998 to 2001.

Preliminary Access and Funding Results

Given the substantially lower than expected enrollment numbers, it is unlikely that either site significantly increased access to the medication among the targeted populations at this time. However, of those enrolled in the program, the majority of target group participants had not received outpatient medication management treatment in the year prior to program entry.

Thus, the programs enrolled persons who had limited history of access to the medications through the public mental health system. Only 5 percent of Harborview and 35 percent of Pierce participants had medication management treatment in the year prior to program entry; after program enrollment the figures increased to 73 and 96 percent, respectively.

In both programs, approximately half the participants obtained Medicaid coverage or another medication funding source. Thus, the programs provided transitional funds necessary to bridge the medication gap for half of the participants. However, about half the participants left treatment without funding. Obviously, a higher proportion retained in treatment with funding would have been a desired outcome. Low medication compliance rates, consistent with other studies of compliance with atypical antipsychotic medications, participant characteristics indicating a difficult-to-treat population, and a lack of program funds for follow-up services may have worked against better retention and funding outcomes.

Future Research

At this point, sufficient time has not yet elapsed to address all outcomes identified by the Legislature. Program participants have less than a one-year follow-up period; thus, post-measures are not yet available. The Institute will continue to collect data on participants for a full year and provide a final report on participants' employment, mental health, and criminal justice outcomes to the Legislature in December 2002.

INTRODUCTION

Schizophrenia and other psychiatric and neurological disorders are now being treated with new medications commonly called "atypical antipsychotics." For many people, atypical antipsychotics are more effective and provide a better chance of living productively in society. This new generation of antipsychotic medication has different therapeutic actions, including less severe side effects than the former generation of drugs used to treat these debilitating diseases (Voruganti et al., 2000). While the atypical antipsychotic medications are much more expensive than their predecessors, research from clinical trials suggests that they can be cost-effective (Essock et al., 2000).

For a number of reasons, access to atypical antipsychotic medications can be problematic for certain populations (see Appendix A). Current income and resource limits preclude eligibility for prescription drug benefits for a number of low-income individuals, leaving them without access to medications. Individuals experiencing a psychiatric crisis for the first time who meet eligibility for medical assistance may have a significant waiting period while applications for benefit programs are processed. Furthermore, individuals who are institutionalized in a psychiatric hospital, jail, or prison for a long period of time may have their benefits suspended. When released from these institutions, these individuals may experience a delay before their benefits are reinstated, leaving them without means for health care and prescription drugs. Finally, individuals without a permanent address (e.g., homeless persons) have difficulty maintaining eligibility for medical assistance.

In order to address these issues, the 2000 Legislature passed Second Substitute House Bill 2663 (2SHB 2663),[3] providing for the distribution of atypical antipsychotic medications to underserved populations who present a risk of harm to themselves and the community. The legislation is intended to protect public health, safety, and welfare as well as reduce the economic and social costs associated with untreated schizophrenia and other psychiatric and neurological disorders by promoting access to atypical antipsychotic medications. The Legislature appropriated $1 million in the fiscal year 2001 budget for the distribution of the medications and basic program operations.

Two organizations bid for and were awarded contracts to distribute the medications through a Department of Social and Health Services (DSHS) competitive bidding process: Harborview Mental Health Services (Harborview) in King County and Pierce County Regional Support Network (Pierce). Pierce began enrolling individuals into its program in November 2000, and Harborview began enrolling individuals in January 2001.

The Outcome Evaluation

In order to assess the effectiveness of 2SHB 2663, the Legislature mandated an outcome study to be conducted by the Washington State Institute for Public Policy (Institute) to address the following issues:

[3] Enacted March 30, 2000, Chapter 217, Laws of 2000.

- What effects do the medications have on the target population's:
    - Ability to perform basic living skills and maintain a job;
    - Adherence to medication regimens;
    - Use of hospital and other mental health resources; and
    - Criminal recidivism?

- Has 2SHB 2663 increased access to atypical antipsychotic medications for the targeted population?

- Is there uniformity by health care providers in prescribing atypical antipsychotic medications?

This study utilizes a "one-group, pre-post research design" to answer these questions.[4] Individuals receiving atypical antipsychotic medications are identified, and their outcomes are being followed at least one year after program enrollment. Similar data are being collected for each individual one year prior to program enrollment. These pre- and post-measures will be compared to assess differences in work patterns, mental health service utilization, and criminal justice involvement. If sample size permits, we will utilize multivariate analyses to address the question of what factors might be associated with success or failure as determined by criminal justice and mental health service utilization outcomes. In addition, we plan to use medication prescription records to assess health care provider uniformity. The evaluation uses data from existing administrative data sets, including employment, mental health, and criminal justice (see Appendix B).

At this point, sufficient time has not yet elapsed to address all outcomes identified by the Legislature. Program participants have less than a one-year follow-up period; thus, post-measures are not yet available. The Institute will continue to collect data on participants for a full year and provide a final report to the Legislature in December 2002.

This initial report provides descriptive statistics on three issues: the programs, the participants, and preliminary access and funding results for individuals entering the program prior to June 30, 2001. Program characteristics include enrollment and length of time in the program, while participant characteristics include demographic, mental health, and criminal history data. The preliminary results include the program's effect on participants' access to atypical antipsychotic medications and whether clients found a stable medication funding source.

[4] A comparison group of equivalent individuals who did not receive medication under 2SHB 2663 was unavailable, and no existing studies with similar populations were found to use for this purpose.

CHARACTERISTICS OF ATYPICAL ANTIPSYCHOTIC PROGRAMS

This section outlines the legislative requirements for eligibility to the atypical antipsychotic medications program and the awarding of contracts.[5] These requirements provide the foundation for key program characteristics. We also report on the characteristics of the Harborview and Pierce programs, based on persons enrolled from November 2000 (Pierce) or January 2001 (Harborview) through June 30, 2001. We include data on the number of enrollees in the programs, the number and proportion of enrollees meeting eligibility requirements and priority population status, the length of time in the program, and the reasons for leaving the program.

Legislative Requirements

2SHB 2663 included specific criteria for program eligibility and the awarding of contracts:

Criteria for program eligibility:

- A diagnosis of schizophrenia or other psychiatric or neurological condition treated with atypical antipsychotic medication;
- An income of less than 200 percent of the federal poverty level;
- No coverage by insurance or any other benefit that would pay for the medication; and
- An exception on insurance coverage if the co-payment was determined to be cost-prohibitive.[6]

Conditions for the awarding of contracts:

- Targets children and adults transitioning from state or local correctional or detention facilities;
- Targets children and adults who recently received services under involuntary civil commitment laws (RCW 71.05 and 71.34);
- Provides temporary access to the medications until the person has obtained coverage or achieved final capacity to pay for them;
- Dispenses medications as part of a comprehensive service program; and
- Maximizes cost savings in service delivery and medication costs.

Both Harborview and Pierce agreed to adhere to the program eligibility requirements in their enrollment process. They also agreed to the contract award conditions. To promote access to the targeted populations, Harborview and Pierce identified certain facilities and agencies as

[5] For descriptions of similar programs in other states, see Appendix C.

[6] "Cost-prohibitive" is defined as follows: (a) If total family income is below the SSI Income Standard (currently $539 per month for a one person family), any co-payment amount; (b) If total family income meets or exceeds the SSI Income Standard and is less than 200 percent of the federal poverty level, a monthly co-payment amount of at least $20.

referral sources. Table 1 lists the facilities each site indicated it would enroll individuals from in order to meet the criteria for the target population. Harborview identified external facilities in King County in addition to Harborview Medical Center (HMC) and Harborview Mental Health Services (HMHS). Pierce County Regional Support Network (RSN) focused on core facilities and providers.

Table 1
Target Population: Priority Facilities

Harborview Priority Facilities	Pierce RSN Priority Facilities
• King County Jail • King County Mental Health Court • Seattle, King County, and State Police Departments • Local Adult and Juvenile Detention Facilities • Local Involuntary Treatment Providers • HMC Crisis Triage Unit • HMC Inpatient Units • HMHS Crisis Intervention Services	• Puget Sound Behavioral Health • Pierce County Detention and Corrections Facility • Core Service Agencies, Access Centers, and Crisis Teams • Offenders released by the Washington State Department of Corrections and identified as a dangerous mentally ill offender (DMIO)

Both sites agreed to provide comprehensive services for clients;[7] no funding was provided in the legislation for services. Each site also agreed to charge 5 percent of all costs for program operation in order to maximize cost savings. In addition, in order to increase access and not to supplant local funds, Harborview and Pierce agreed not to enroll individuals who had previous services at HMHS and Pierce core facilities and providers, respectively, in the past 365 days.[8] Furthermore, Pierce agreed that individuals transitioning from Pierce County Detention and Corrections Facility would receive program funds only up to 30 days prior to discharge and release.[9]

[7] Comprehensive services include identification and verification of eligibility, psychiatric assessment, psychiatric medication evaluation and monitoring, individualized treatment plan, case management services, assistance with public assistance and medical benefits, and specialized needs programs and services as resources allow.
[8] This language was dropped from the contracts as of June 2001.
[9] Pierce RSN also had a contract specification limiting program participation to four months; we assume this was a response by Pierce to the "temporary access" criteria. This specification was dropped in the fall of 2001.

Enrollment

Total enrollment in both programs through June 2001 was 136. Harborview enrolled 80 individuals during the first six months of 2001, an average of approximately 13 per month. Pierce enrolled 56 individuals between November 2000 and June 2001, an average of seven per month. Monthly enrollment patterns do not show any consistent trends. While we do not have final administrative data, Harborview reports that enrollment after June has proceeded similarly, with an enrollment of approximately two to four clients per week.[10] We do have preliminary Pierce administrative data from July and August 2001 that indicate enrollment doubled during those months compared with previous months. It may be that contract changes in June (dropping the requirement that individuals who had previous services in their respective sites in the past 365 days could not be served) had a large effect on the Pierce enrollment.

Both sites projected a much larger enrollment in proposals to and contracts with the Department of Social and Health Services Mental Health Division (MHD).[11] Harborview expected to enroll approximately 58 participants per month, and Pierce expected to enroll approximately 61. Based on administrative data, each site projected maximum numbers for relevant populations that indicated a possible funding gap. However, the maximum numbers appear to be too high, and client and administrative barriers may have worked against the projections.

Table 2
Program Enrollment by Month
November 2000–June 2001

Month	Harborview	Pierce	Total
November 2000	0	1	1
December 2000	0	5	5
January 2001	16	9	25
February 2001	11	11	22
March 2001	16	6	22
April 2001	11	4	15
May 2001	11	8	19
June 2001	15	12	27
Total	80	56	136

[10] E-mail from Nikki Behner, HMHS administrator, to the MHD, November 9, 2001.
[11] Harborview Medical Center, RFP No. 001367, Providing Access to Atypical Antipsychotic Medications; Pierce County RSN/PHP, RFP #001367, Response to "Providing Access to Atypical Antipsychotic Medications; DSHS and Pierce RSN Prepaid Health Plan Program Agreement, DSHS contract number 0069-44616; DSHS and Harborview Interlocal Agreement, DSHS contract number 0065-44484.

Program Eligibility and Priority Population Status

Table 3 shows the eligibility and priority population status for participants in the Harborview and Pierce programs. Nearly all those enrolled—98 percent in each site—met the criteria of having no insurance coverage that would pay for atypical antipsychotic medications. Few individuals entered the program having insurance with a cost-prohibitive co-payment.

The legislative target population included individuals transitioning from involuntary mental health civil commitment and correctional facilities. Table 3 shows that 27 percent of Harborview's participants were from the target population. This included 12 percent referred from involuntary commitment facilities and 15 percent referred from criminal justice facilities, primarily King County Corrections. In Pierce, 58 percent of participants were from the target population. Approximately 29 percent were involuntary civil commitment referrals from Puget Sound Behavioral Health, and 29 percent were referrals from Pierce County Detention and Corrections Facility.

In both the Harborview and Pierce contracts with the MHD, individuals in acute crisis were identified as another priority population. These individuals are included under the Mental Health Referral category (see Table 3). Approximately 38 percent of Harborview's participants fall into this category, which included referrals from HMC and other hospitals, HMC crisis triage unit, HMHS, and other crisis centers.[12] Approximately 43 percent of Pierce participants included priority population referrals from agency access teams, crisis triage, and crisis teams.

Table 3
Eligibility and Priority Population Status
November 2000–June 2001

	Harborview (N=80)		Pierce (N=56)		Total (N=136)	
	N	%	N	%	N	%
Eligibility						
No Insurance	78	98%	55	98%	133	98%
Cost Prohibitive Co-Payment	2	3%	1	2%	3	2%
Priority Population						
Involuntary Civil Commitment	10	12%	16	29%	26	19%
Criminal Justice Referral	12	15%	16	29%	28	21%
Mental Health Referral	30	38%	24	43%	54	40%
Other Referral	28	35%	0	0%	28	21%

Percentages may not total 100 due to rounding.

[12] Harborview had a large proportion of "other" referrals, including referrals from family, friends, self, and unknown sources.

Table 4 shows the length of time participants spent in the program. Six clients at Harborview and 16 clients in Pierce are excluded because they did not have a program end date as of September 2001, the period administrative data was received.[13] Most program participants were served for a short period of time, in accordance with the transitional funding mandate. At Harborview, the largest proportion of clients were served by the program for 31 to 60 days. The number of days in the Harborview program ranged from nine to 217, with 62 being the average. The largest proportion of Pierce clients were enrolled and exited the program within one month. The number of days in the Pierce program ranged from four to 151, with 40 being the average. Overall, about one-quarter of participants spent over 90 days in the program.

Table 4
Length of Time in the Program

	Harborview (N=74)		Pierce (N=40)		Total (N=114)	
	N	%	N	%	N	%
0–30 Days	16	22%	20	50%	36	32%
31–60 Days	27	36%	7	18%	34	30%
61–90 Days	12	16%	4	13%	16	14%
Greater Than 90 Days	19	26%	9	23%	28	25%
Average Days	62		40		51	

Percentages may not total 100 due to rounding.

Six Harborview and 16 Pierce participants without a program end date are excluded from the data.

[13] Pierce receives data from providers after an individual leaves the program and at the time each agency requests reimbursement; thus, a time lag exists in its administrative data.

PROFILE OF PROGRAM PARTICIPANTS

This section describes the characteristics of participants enrolled in the Harborview and Pierce programs from November 2000 through June 2001.[14] Harborview has 80 participants enrolled, and Pierce has 56. The characteristics examined include the following: demographics, living arrangement, income and employment, criminal background, and mental health services.

Demographic Characteristics and Living Arrangement

Demographics. Table 5 shows the demographics for clients at each site. Two-thirds of all participants were male, with a slightly higher proportion of males in Pierce. Participants were predominantly white. In Pierce, approximately 79 percent of all participants were white, compared with 46 percent at Harborview. Harborview had a higher proportion of African-Americans and Asians, 33 and 16 percent respectively, reflecting its location and the population it serves. In both sites, over half of the clients were between the ages of 31 and 45. The proportion of persons under 21 at both sites was relatively small, 3 percent at Harborview and 7 percent at Pierce.

Table 5
Client Demographic Characteristics

	Harborview (N=80)		Pierce (N=56)		Total (N=136)	
	N	%	N	%	N	%
Gender						
Female	31	39%	15	27%	46	34%
Male	49	61%	41	73%	90	66%
Ethnicity						
White	37	46%	44	79%	81	60%
African American	26	33%	4	7%	30	22%
Hispanic	4	5%	2	4%	6	4%
Asian	13	16%	3	5%	16	12%
Native American	0	0%	3	5%	3	2%
Age						
Under 21	2	3%	4	7%	6	4%
30 or Less	20	25%	11	20%	31	23%
31 to 45	43	54%	32	57%	75	55%
46 or More	15	19%	9	16%	24	18%
Average Age	37.5		36.5		37.1	

Percentages may not total 100 due to rounding.

[14] The cut-off date of June 2001 was necessary in order to acquire necessary administrative data.

Living Arrangement. Table 6 shows the living arrangements of participants, reflecting the population differences between the two sites. Over 50 percent of participants at Harborview were homeless, and 44 percent were in independent living arrangements, alone, or with others. In contrast, only 10 percent were homeless in Pierce, while 75 percent were in independent living arrangements, and 8 percent were in supervised housing.

Table 6
Client Living Arrangements

	Harborview (N=80)		Pierce (N=48)		Total (N=128)	
	N	%	N	%	N	%
Living Arrangement						
Independent	35	44%	36	75%	71	55%
Homeless	42	53%	5	10%	47	37%
Supervised Housing	1	1%	4	8%	5	4%
Temporary	2	3%	0	0%	2	2%
Other	0	0%	3	6%	3	2%

Eight Pierce participants are excluded due to missing data.

Participant Psychiatric Diagnosis and Functioning

To receive medication under 2SHB 2663, a diagnosis of schizophrenia or other psychiatric or neurological condition is required to be treated with atypical antipsychotic medication. The data indicate that nearly all participants had a major mental illness diagnosis involving a psychotic or mood disorder category, as defined in the Diagnostic and Statistical Manual of the American Psychiatric Association.[15] Figure 1 shows the primary psychiatric diagnosis for program participants in both sites.[16]

Overall, approximately 11 percent of participants had a diagnosis of schizophrenia, and 30 percent had other major psychotic disorders, including schizophreniform disorder, brief psychotic disorder, or psychosis not otherwise specified (NOS). About 46 percent of participants were diagnosed with a mood disorder, including 25 percent with bipolar disorder, 13 percent with major depression, and 8 percent with mood disorder NOS. A small proportion of participants were diagnosed with depressive, anxiety and substance-related disorders.

[15] Diagnostic and Statistical Manual of the American Psychiatric Association (4th Edition) (DSM-IV).
[16] The source of diagnostic data is the King and Pierce County Regional Support Network administrative database.

Figure 1

Primary Psychiatric Diagnosis of Program Participants

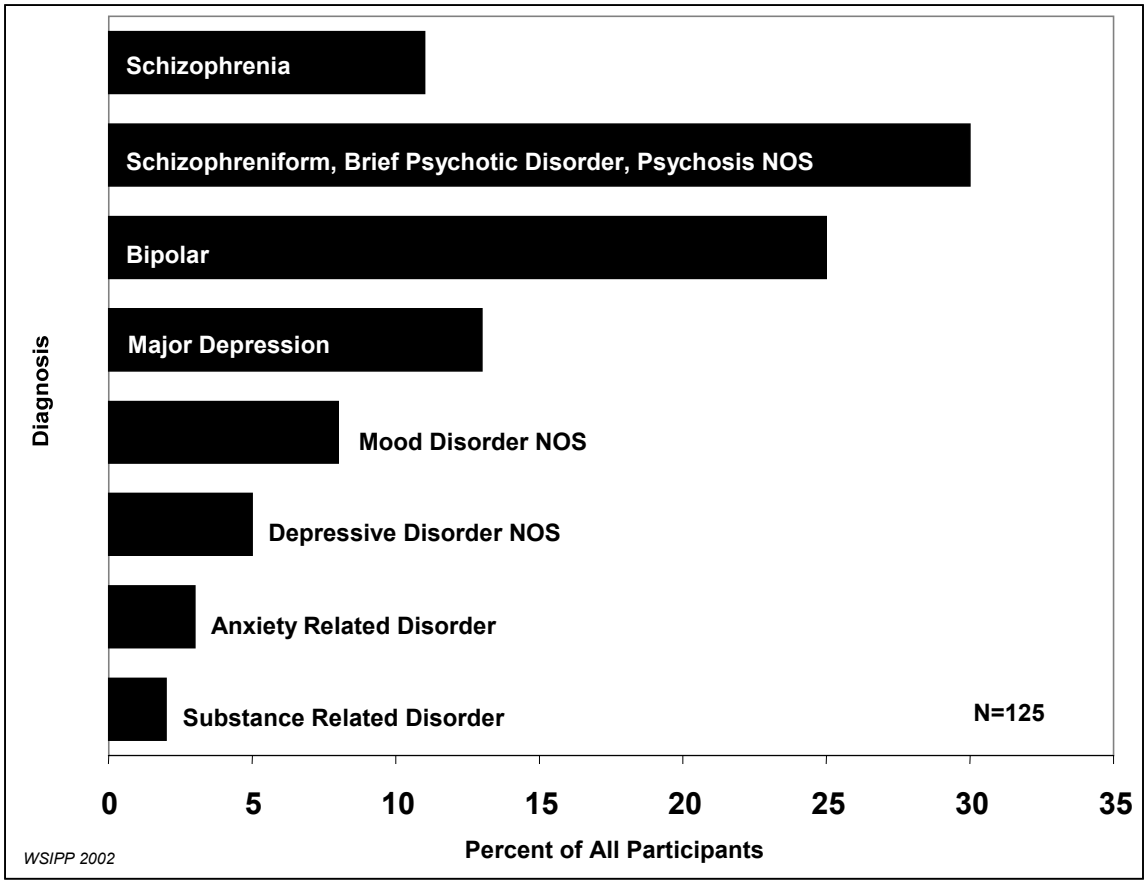


Table 7 presents the primary psychiatric diagnosis by site. The distribution of diagnoses across sites is fairly similar, with nearly even proportions of participants in each site falling into major psychotic and mood disorder categories. Table 7 also shows whether a participant had a co-occurring substance disorder as a diagnosis. Nearly half of the participants at Harborview had this diagnosis compared with 16 percent of Pierce participants.

Table 7
Primary Psychiatric Diagnosis and Co-Occurring Substance Disorders by Site

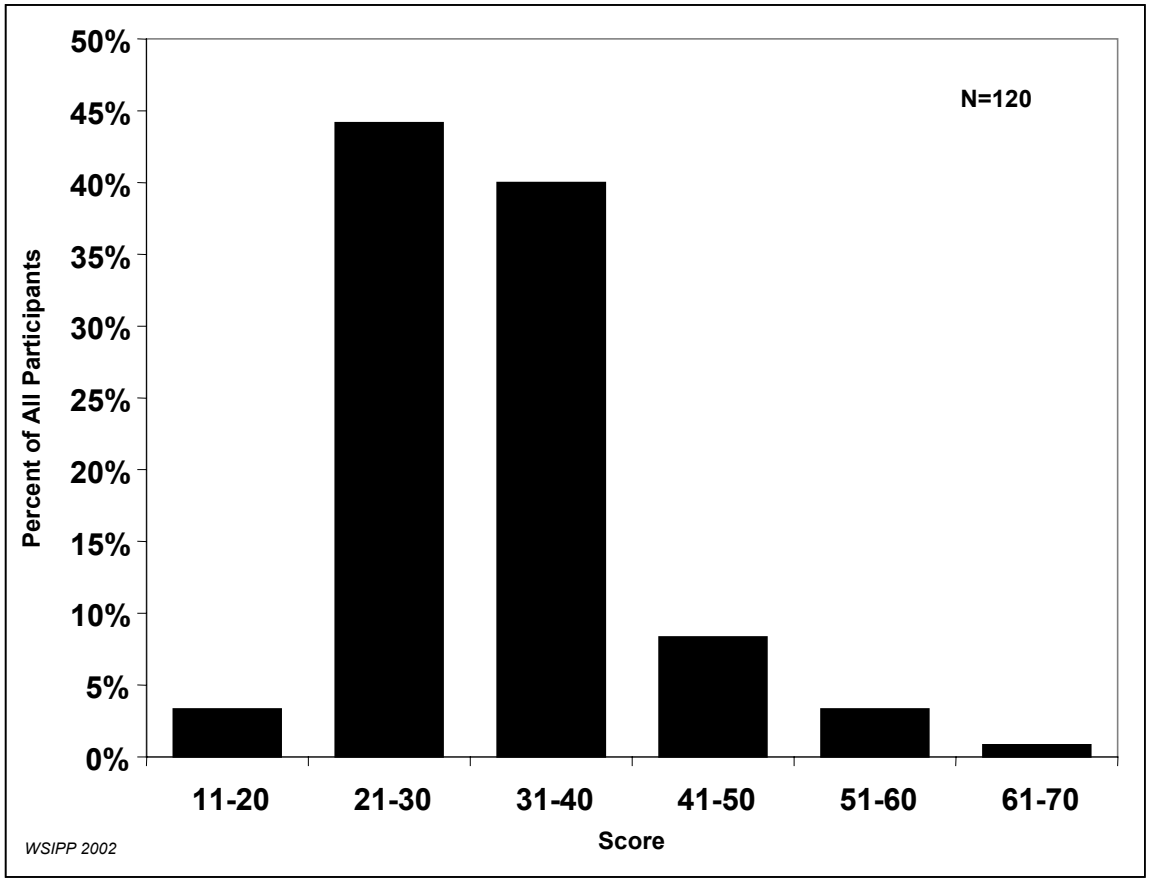
	Harborview (N=80)		Pierce (N=45)		Total (N=125)	
	N	%	N	%	N	%
Psychotic Disorder						
Schizophrenia	6	8%	8	18%	14	11%
Schizophrenia, Schizoaffective, Brief Psychotic Disorder, Psychosis NOS	28	35%	10	22%	38	30%
Mood Disorder						
Bipolar	15	19%	16	36%	31	25%
Major Depression	11	14%	5	11%	16	13%
Mood Disorder NOS	10	13%	0	0%	10	8%
Other Axis 1 Categories						
Anxiety Disorders	3	4%	4	9%	7	6%
Substance-Related Disorder	2	3%	1	2%	3	2%
Depressive Disorder NOS	5	6%	1	2%	6	5%
Co-Occurring Substance Disorder						
Yes	37	46%	9	16%	46	34%
No	43	54%	47	84%	90	66%

Percentages may not total 100 due to rounding.
Eleven Pierce participants are excluded from primary psychiatric diagnosis due to missing data.

The Global Assessment of Functioning (GAF) scale is a standard measure of clinician judgment on an individual's current level of psychosocial functioning.[17] Scores range from zero to 100, with higher scores indicating a higher level of functioning (see Appendix D for detailed category definitions). Clinicians at both program sites assessed client functioning at or near program entry.

Figure 2 indicates that program participants had very low functioning, which involved major impairments in at least several cognitive areas. The majority of participants in both sites fell into two score categories: 21 to 30, which includes behavior influenced by delusions or hallucinations or serious impairment in communication or judgment or inability to function in almost all areas; and 31 to 40, which involves some impairment in reality testing or communication or major impairment in several areas. Overall, Harborview participants had slightly lower GAF scores than Pierce (see Table 8).

Figure 2
Global Assessment of Functioning Scores for All Participants



[17] Diagnostic and Statistical Manual of the American Psychiatric Association (4th Edition) (Axis V, DSM-IV).

Table 8
Global Assessment of Functioning Score by Site

Global Assessment of Function	Harborview (N=80)		Pierce (N=40)		Total (N=120)	
	N	%	N	%	N	%
11–20	2	3%	2	5%	4	3%
21–30	43	54%	10	25%	53	44%
31–40	33	41%	15	38%	48	40%
41–50	1	1%	9	23%	10	8%
51–60	1	1%	3	8%	4	3%
61–70	0	0%	1	3%	1	1%

Percentages may not total 100 due to rounding.
Sixteen Pierce participants are excluded due to missing data.

Income and Employment

The legislation required that participants have an income of less than 200 percent of the federal poverty level.[18] Both Harborview and Pierce recorded each client's income source at program entry (see Table 9). Only 7 percent of participants reported being employed, which included approximately 5 percent at Harborview and 9 percent in Pierce. Overall, 35 percent of participants reported they relied on some form of public assistance for their income: 45 percent at Harborview, and 21 percent at Pierce. The majority of participants (43 percent) reported no income source; that percentage was nearly identical at both sites.

Table 9
Income Source and Employment

	Harborview (N=80)		Pierce (N=56)		Total (N=136)	
	N	%	N	%	N	%
Income Source						
Employment	4	5%	5	9%	9	7%
Public Assistance	36	45%	12	21%	48	35%
None	34	43%	25	45%	59	43%
Unknown	6	8%	14	25%	20	15%
Employment: Wage in Prior Year						
None	49	61%	39	70%	88	65%
$1–$5,000	16	20%	9	16%	25	18%
$5,001–$15,000	7	9%	5	9%	12	9%
>$15,001	8	10%	3	5%	11	8%

Percentages may not total 100 due to rounding.

[18] The federal poverty for one person is $8,590; for a family of four it is $17,650.

Table 9 also includes wages for the four quarters prior to program enrollment for all participants as found in Washington State Employment Security records. The wage data support the administrative program data, indicating that 65 percent of participants had no record of earned wages. However, approximately one-third of participants had some wage income in the year prior to program enrollment, although the majority of this group had wages of $5,000 or less. A small percentage of clients, 10 percent at Harborview and 5 percent at Pierce, had income over $15,000 in the year prior to program enrollment.

Prior Criminal History

The data depict a severe mentally ill population, the majority of which are men between 31 and 45 years of age who have few economic resources. There is a great deal of research indicating that similar populations are likely to rotate in and out of the criminal justice system (Teplin, 1994; Lovell et al., 2001). In addition, it is expected to have a population with some criminal history, as the legislation identified individuals transitioning out of correctional and detention facilities as a target population. As reported earlier, 15 percent of the Harborview and 29 percent of Pierce participants met that legislative criteria.

Figure 3 shows Washington State adult criminal convictions for felony and misdemeanor offenses for participants during their lifetime and one year prior to program enrollment.[19] Approximately one-third of participants at Harborview and Pierce had been convicted of an adult felony offense sometime in their lives: 31 percent of Harborview and 34 percent of Pierce participants. In the year prior to program entry, 9 percent of Harborview and 21 percent of Pierce participants were convicted for a felony crime. Slightly higher numbers of participants had an adult misdemeanor conviction sometime in their lives: 34 and 41 percent of Harborview and Pierce participants, respectively. In the year prior to program entry, 11 percent of Harborview and 23 percent of Pierce participants were convicted of a misdemeanor crime.

[19] The conviction data are from the Institute's criminal justice database (see Appendix B).

Figure 3
Prior Adult Felony and Misdemeanor Convictions

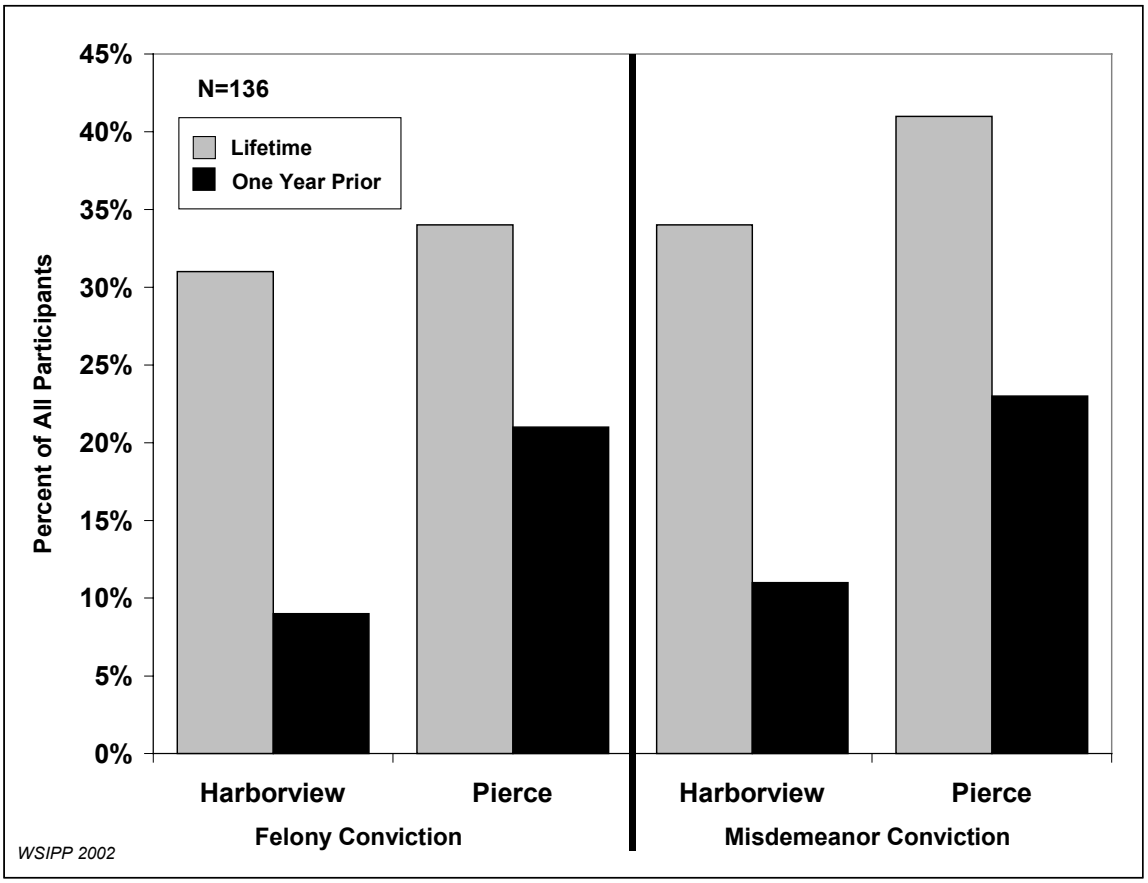


Table 10 reports the most serious adult criminal conviction of program participants. The categories in order of highest to lowest seriousness include felony and misdemeanor person, sex, property, drug, and other crimes. The majority of participants in each site had a felony criminal conviction as their most serious crime. Looking at specific felony categories, the data show that of all Pierce participants convicted of a crime, 44 percent were convicted of a crime against a person compared with 29 percent at Harborview. The crimes committed by program participants in the "person" category included assault and robbery.

Felony property crimes comprised another large category of participants' most serious convictions. Approximately 32 percent of Harborview and 26 percent of Pierce participants had a felony property crime as their most serious offense. In addition, Harborview had a high proportion of participants (19 percent) convicted of a felony drug crime as their most serious offense.

Misdemeanor crimes against a person accounted for the most serious crime for 10 and 15 percent of Harborview and Pierce participants, respectively, with a smaller proportion of participants having a most serious crime in the misdemeanor sex, property, or other category.

Table 10
Most Serious Adult Criminal Conviction by Site

		Harborview (N=31)		Pierce (N=27)		Total (N=58)	
		N	%	N	%	N	%
Felonies	Person	9	29%	12	44%	21	36%
	Sex	0	0%	0	0%	0	0%
	Property	10	32%	7	26%`	17	29%
	Drug	6	19%	0	0%	6	10%
	Other	0	0%	0	0%	0	0%
Misdemeanors	Person	3	10%	4	15%	7	12%
	Sex	1	3%	0	0%	1	2%
	Property	2	6%	2	7%	4	7%
	Drug	0	0%	0	0%	0	0%
	Other	0	0%	2	7%	2	3%

Percentages may not total 100 due to rounding.

Mental Health Service Utilization

Table 11 shows the proportion of Harborview and Pierce participants who received public mental health inpatient and outpatient services in the year prior to program enrollment.[20] In most cases, this includes events such as involuntary civil commitment, which immediately preceded program entry.

Inpatient mental health services include state hospital, community hospital, and evaluation and treatment facility days. The data show that about 15 percent of participants were admitted to community hospitals for mental health treatment the year prior to program entry. Pierce had a higher proportion of participants admitted to a community hospital (26 percent), reflecting Puget Sound Behavioral Health as a referral site for involuntary civil commitment patients. Pierce also had a greater proportion of participants with state hospital days, most of which involved days in a forensic unit. Nine percent of participants at Harborview received services in an evaluation and treatment center in the year prior to program entry.

Table 11
Public Mental Health Services Received in the Year Prior to Program Entry

	Harborview (N=77)		Pierce (N=54)		Total (N=131)	
Service	**N**	**%**	**N**	**%**	**N**	**%**
Inpatient						
Community Hospital	6	8%	14	26%	20	15%
State Hospital	1	1%	4	7%	5	4%
Evaluation and Treatment Facility	7	9%	0	0%	7	5%
Outpatient						
Any Outpatient	20	26%	39	72%	59	45%
Medication Management	4	5%	19	35%	23	18%

[20] For these analyses, we were able to match only 77 out of 80 Harborview and 54 out of 56 Pierce participants to the MHD administrative data.

Outpatient services are also displayed in Table 11. Approximately 45 percent of participants received some form of outpatient services in the year prior to program entry, with Pierce participants more likely to have received outpatient services than Harborview participants (72 percent compared with 26 percent). Medication management treatment services are included in this table because they are especially relevant for this program. Overall, 18 percent of participants received medication management treatment in the year prior to program entry. Clients at Pierce were more likely to receive medication management (35 percent) than Harborview participants (5 percent).

Outpatient treatment rates climbed to include 100 percent of all participants after program entry, as would be expected. Medication management also climbed to 96 percent of participants in Pierce and 73 percent at Harborview receiving outpatient services after program entry.

In order to assess participants' continuity in receiving outpatient public mental health services, we calculated the number and percentage of participants receiving services in each of the years from 1998 to 2001. Table 12 shows that Pierce participants were more likely to receive continuous outpatient treatment than Harborview participants (26 percent compared with 5 percent). A smaller percentage of participants received continuous medication management treatment over the four consecutive year period.

Table 12
Participants Receiving Consecutive Outpatient Services, 1998–2001

	Harborview (N=77)		Pierce (N=54)		Total (N=131)	
Service	**N**	**%**	**N**	**%**	**N**	**%**
Any Outpatient	4	5%	14	26%	18	14%
Medication Management	1	1%	7	13%	8	6%

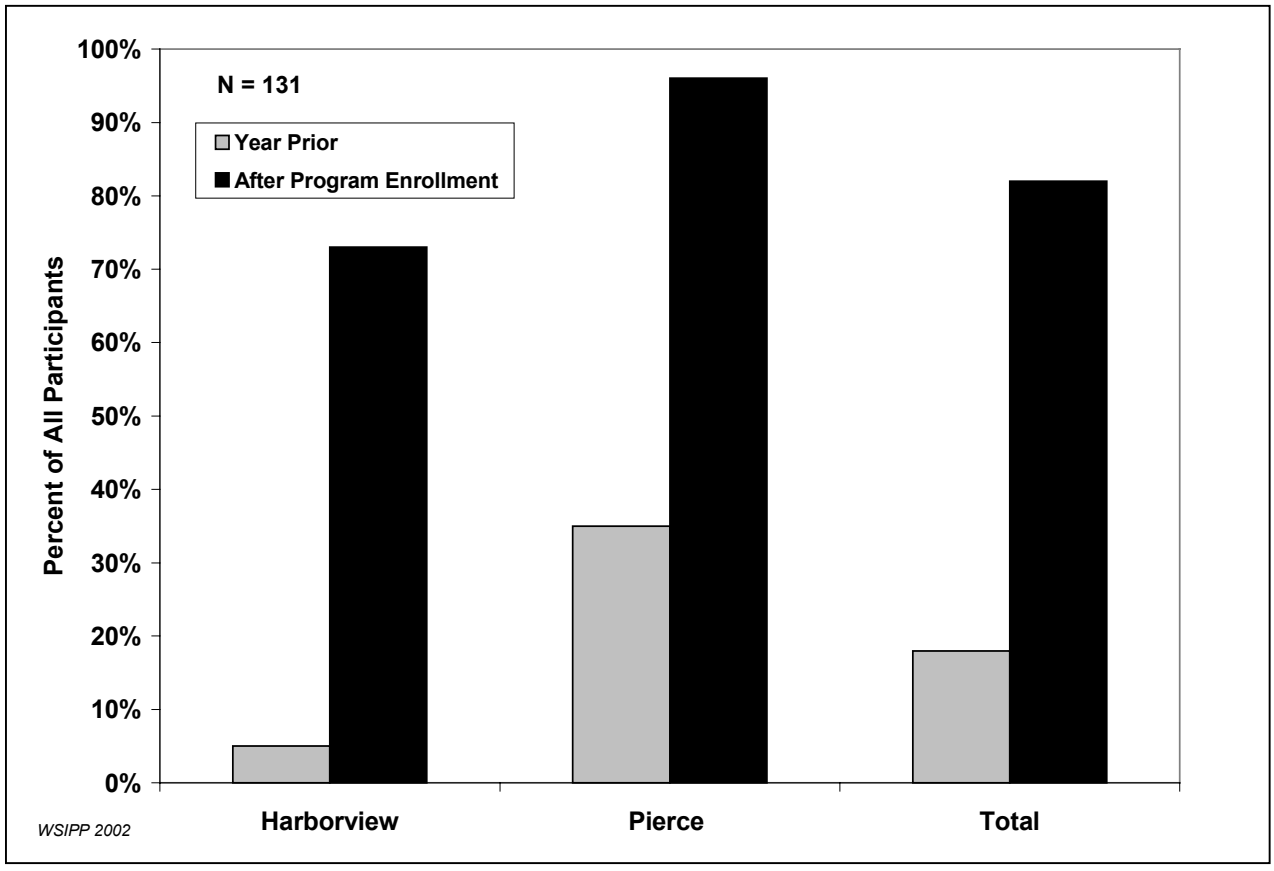
INITIAL ACCESS AND FUNDING RESULTS

Access to Atypical Antipsychotic Medications

Significant data resources would be required for a complete analysis of the program's effect on the target population's access to atypical antipsychotic medications. It would be necessary to identify all individuals in the target population in both sites and determine the number receiving atypical antipsychotic medications. This process would have to be completed prior to the start of the program and again after the program was in place. This type of effort is beyond the information available in administrative data.

However, the *effect on access* for program participants can be assessed using administrative data from the Mental Health Division (MHD). Medication management is a program service that accompanies the receipt of atypical antipsychotic medications. Figure 4 shows the percentage of participants who received medication management in the year prior to program entry: 5 percent at Harborview and 35 percent in Pierce. After program enrollment, approximately 73 percent of Harborview participants and 96 percent of Pierce participants had MHD records indicating receipt of medication management services.

Figure 4
Medication Management Treatment Prior to and After Program Entry



Thus, both programs enrolled persons who had little history of access to the medications through the public mental health system. But, while access to atypical antipsychotic medications has improved for program participants, both Harborview and Pierce experienced significant problems in trying to extend program access, which is reflected in the low enrollment numbers. Administrative documents from Harborview, Pierce, and the MHD suggest several reasons why program enrollment numbers were lower than expected.

Harborview identified a number of program access problems.[21] First was an assumption that program staff would be able to meet, engage, and enroll a client in continued services directly from institutional settings. Instead, extraordinary outreach and engagement efforts prior to enrollment were necessary, requiring extensive staff resources not provided under the contract.

Second, due to pharmacy regulations, Harborview was only able to dispense medications for medical practitioners who work for HMC, thus limiting their ability to work with practitioners in other facilities. Third, clients who entered into acute psychiatric services at Harborview did not necessarily present physicians with clear evidence and justification for an antipsychotic medication. During the client's course of treatment, he or she may have been funded and treated with other medications; by the time these clients evidenced a need for an atypical antipsychotic medication, they were not linked back to the program.

Pierce also identified a number of program difficulties.[22] First, if community providers had a large enough supply of pharmaceutical samples, they sometimes preferred to use that option rather than completing the administrative paperwork necessary for enrollment and billing for the transitional funding program. Second, there was a great deal of emphasis on not supplanting local funds, creating reluctance to use the program if samples were available.

Funding Sources

Table 13 shows the participants' funding source at the time they left the program. As specified in the legislation, programs were expected to provide temporary access to atypical antipsychotic medications until the participant obtained coverage or the financial capacity to pay for the medication. At Harborview, approximately 53 percent of participants obtained Medicaid; 46 percent left without funding. In Pierce, 43 percent of the clients obtained Medicaid, while 13 percent found another source for the medication (primarily pharmaceutical samples); 45 percent had no funding when they left the program. No clear patterns were found in these early data to indicate that certain groups (e.g., the target populations, homeless individuals, etc.) were more likely to leave without funding.

[21] E-mail from Nikki Behner, HMHS administrator, to the MHD, November 9, 2001.
[22] Start-up report from Pierce to the MHD, January 29, 2001; e-mail from Dave Stewart to author, Pierce County administrator, January 16, 2002.

Table 13
Funding Sources

	Harborview (N=74)		Pierce (N=40)		Total (N=114)	
	N	%	N	%	N	%
Obtained Medicaid	39	53%	17	43%	56	49%
Obtained Other Medication Source	1	1%	5	13%	6	5%
Left Without Funding	34	46%	18	45%	52	46%

Percentages may not total 100 due to rounding.
Six Harborview and 16 Pierce participants without program end dates are excluded from the data.

SUMMARY AND DISCUSSION

The major findings on atypical antipsychotic program enrollment and participant characteristics are summarized below.

Characteristics of the Pierce and Harborview Programs

- Harborview and Pierce enrolled approximately 13 and 7 participants a month, respectively, in the first six to eight months of program operation.
- The actual number enrolled in both sites was far below projected numbers.
- Approximately 27 percent of Harborview and 58 percent of Pierce participants fell into the target population of individuals transitioning from correctional or involuntary commitment facilities.
- The majority of participants in both sites received medications for less than 60 days, consistent with the legislative mandate of transitional funding.

Profile of Program Participants

Demographic Characteristics

- The majority of participants in both sites were white males between the ages of 31 and 45.
- Harborview had a higher proportion of African-American and Asian participants, reflecting the central city population it serves.
- Over 50 percent of Harborview participants were homeless, as were 10 percent of Pierce participants.

Mental Illness Diagnoses

- About 40 percent of the participants in each site had a psychotic disorder as a primary diagnosis, including schizophrenia, schizophreniform disorder, brief psychotic disorder, and psychosis not otherwise specified.
- Nearly half the participants had a primary diagnosis of a mood disorder, including bipolar, major depression, and mood disorder not otherwise specified.
- Nearly half the participants at Harborview had a co-occurring substance disorder, as did 16 percent of Pierce participants.
- Participants in both sites were rated as low functioning on the Global Assessment of Functioning scale, indicating major impairment in at least several cognitive areas.

Income and Employment

- Most program participants reported public assistance or no income source at program entry.
- Nearly two-thirds of participants had no wages recorded in Employment Security records in the four quarters prior to program enrollment.
- Of the one-third of participants with recorded wages, the largest proportion of participants had wages ranging from $1 to $5,000.

Prior Criminal History

- Approximately 31 percent of Harborview and 34 percent of Pierce participants had an adult felony conviction.
- Approximately 34 percent of Harborview and 41 percent of Pierce participants had an adult conviction for a misdemeanor offense.
- The most serious adult criminal conviction for Harborview participants included person crimes (29 percent), property crimes (32 percent) and drug offenses (19 percent). The remaining 20 percent of participants had misdemeanor crimes as the most serious conviction.
- The most serious adult criminal conviction for Pierce participants included person crimes (44 percent) and property crimes (26 percent). The remaining 30 percent of participants had misdemeanor crimes as their most serious conviction.

Public Mental Health System Service Utilization

- Overall, Pierce participants had a higher percentage of inpatient and outpatient services received through the public mental health system.
- Approximately 26 percent of Pierce participants received community hospital inpatient services and 7 percent received state hospital inpatient services in the year prior to program entry.
- Approximately 8 percent of Harborview participants received community hospital inpatient services the year preceding program entry, while 9 percent received services in an evaluation and treatment facility.
- Pierce participants were more likely to receive medication management outpatient treatment in the year prior to program entry than Harborview participants (35 percent compared with 5 percent).
- Approximately 5 percent of Harborview and 26 percent of Pierce clients received outpatient mental health services in each year from 1998 to 2001.

Initial Access and Funding Results

- The programs enrolled participants who had limited history of access to the medication through the public mental health system. A majority of participants had not received medication management outpatient treatment in the year prior to program entry.

- Given the low program enrollment, it is unlikely that either site significantly increased access to the medication among the target population.
- Approximately half the participants in both sites obtained Medicaid funding.

Discussion

The data show that the Harborview and Pierce atypical antipsychotic medication distribution programs are operating in accordance with legislative requirements. Participants are seriously mentally ill with low incomes and no medical coverage. A substantial proportion of those enrolled meet the target population definitions. Both programs are providing temporary access to the medications, in accordance with the transitional funding mandate.

In both programs, approximately half of the participants obtained Medicaid coverage or another medication funding source. Thus, the programs provided transitional funds necessary to bridge the medication gap for half of the participants, a significant outcome. However, about half the participants left treatment without funding. Obviously, a higher proportion retained in treatment with funding would have been a desired outcome. Low medication compliance rates, consistent with other studies of compliance with atypical antipsychotic medications;[23] participant characteristics indicating a difficult-to-treat population; and a lack of program funds for follow-up services may have worked against better retention and funding outcomes.

The Harborview and Pierce programs indicate there are populations with funding gaps, including Medicaid-eligible persons who meet the target population definition: persons transitioning from correctional and involuntary commitment facilities. However, it is very difficult to assess the scope of the access problem from these programs. Pierce has strong connections between correctional and hospital facilities and community providers. With those connections in place, the target population in Pierce had better access to the medications to begin with, and in turn, fewer individuals were likely to experience a funding gap. At Harborview, formal connections between correctional and other hospital facilities did not exist. To develop necessary connections required a start-up effort that was difficult to achieve within a program with no service funding and limited administrative funds.

The majority of target and all participants did not receive medication management treatment in the year prior to program entry. Thus, the programs enrolled participants with limited history of access to atypical antipsychotic medication through the public mental health system. However, given the low enrollment numbers, it is unlikely that either site significantly increased access to the medication among the targeted populations.

The final report, to be completed by December 2002, will provide the Legislature with important information on participants' employment, mental health, and criminal justice outcomes. We also hope to provide more definitive information on access issues, a stronger understanding of the difficulties in implementing the transitional funding programs, and an assessment of provider uniformity in prescribing the medications.

[23] Vanelli et al. (2001) found a 44 percent rate of continuing therapy for patients taking atypical antipsychotic medications; Cramer and Rosenheck (1998) found a mean compliance rate of 58 percent for clients taking antipsychotic medication.

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APPENDIX A: PROBLEMS IN ACCESS TO ATYPICAL ANTIPSYCHOTIC MEDICATIONS

This section summarizes problems that can limit access to atypical antipsychotic medications, with a focus on Washington State. We are unaware of any existing data or needs assessment on the number of persons with limited access to atypical antipsychotic medications; thus, the scope of the Washington's access problem is unknown.

Cost-Prohibitions. Atypical antipsychotic medications, with prices that range from $2,000 to over $4,000 per year, can cost more than ten times the amount of typical antipsychotic medications, making them unaffordable to many individuals with schizophrenia and other psychotic disorders.[24] Fortunately, Medicaid[25] and various private health insurance plans include coverage for atypical antipsychotics in Washington State. However, for individuals whose health coverage does not include prescription drug benefits (generally meaning that there is instead an expensive co-payment when medications are purchased), atypical antipsychotics can be cost-prohibitive. Low income individuals often fall into this category, as their earnings level may preclude them from Medicaid benefits (individuals with incomes more than 200 percent of the federal poverty level are not eligible for Medicaid).

Gap in Services. Individuals transitioning out of jails and correctional facilities often do not have access to atypical antipsychotic medications since they may not have Medicaid benefits (although they are likely to be eligible). Individuals in state, county, or city correctional facilities for more than 30 days have Medicaid benefits revoked and need to reapply when their sentence has ended. Ideally, the jail or correctional facility would assist these individuals in reapplying for Medicaid prior to release so that benefits would be reinstated immediately upon discharge (applications can be submitted up to 30 days prior to release). Unfortunately, this does not occur in all jail or correctional facilities.

As directed in the Offender Accountability Act (RCW 9.94A.010), which became effective in July 2000, the Department of Corrections (DOC) is in the process of placing a risk management specialist in each facility to make assessments of an offender's risk to re-offend and assist with pre-release planning for those in the highest risk category.[26] Pre-release planning includes assisting inmates with a Medicaid application; if eligible, benefits will be instated upon their release. However, mentally ill offenders are not always the highest-risk offenders, suggesting that they may not receive this pre-release assistance. Institutions with a mental health unit, including the Monroe Correctional Complex, McNeil Island Corrections Center, Washington Corrections Center for Women, and the Washington State Penitentiary provide assistance with the Medicaid application to inmates prior to their release; however,

[24] Estimate of costs of atypical antipsychotics (including related labwork and other prescriptions for side effects) based on 2001 billing reports from Harborview Medical Center and Pierce County Regional Support Network.

[25] DSHS Medical Assistance Administration data indicate that of all clients receiving antipsychotic medications in the third quarter of calendar year 2000, nearly 75 percent were receiving atypical antipsychotic medications (data provided by MHD to legislators, May 2001).

[26] Washington State Department of Corrections, Policy Directive: Offender Risk Management, DOC 320.410.

other DOC facilities do not have the applications available or do not regularly provide them to inmates.[27]

County jails are not part of DOC and therefore do not have a statewide policy governing their institutions. The type of pre-release assistance inmates receive varies considerably throughout the state: the majority receive no pre-release assistance, some county jails do have the Medicaid application available for inmates who request it, and others connect inmates to the appropriate regional support network upon their release.[28]

Even in those county facilities where pre-discharge planning does occur, such as Pierce County, obstacles can complicate the immediate reinstatement of Medicaid benefits upon release.[29] State regulations mandate that individuals cannot submit an application until 30 to 45 days before their known release, which is not possible if the release date is unknown, as is often the case. The Department of Social and Health Services (DSHS), which administers the state Medicaid program, has 45 days to determine an individual's eligibility (the average determination takes 29 days).[30] This creates a post-release gap for some individuals in serious need of care. For those in a correctional facility for longer than one year, as well as anyone who has not previously received benefits, a new application has to be made which can take substantially longer than a reapplication.[31] In contrast to jails and correctional facilities, state psychiatric hospitals are required to do pre-discharge planning, and most eligible patients have Medicaid benefits in place when they are discharged from Washington's psychiatric hospitals.[32]

Homeless. Another group of individuals who generally do not have access to atypical antipsychotic medications are the homeless. Individuals without a permanent address are not eligible for Medicaid, and thus would have to reapply or make a new application, if they have not previously received benefits.

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[27] Personnel from Airway Heights Corrections Center, Washington State Reformatory and Farm, Washington State Penitentiary, Stafford Creek Corrections Center, Washington Corrections Center, and Clallam Bay Corrections Center were unaware of a DOC policy regarding pre-release planning, although in a few of the facilities Medicaid applications were available to inmates.

[28] The following county jails provide the Medicaid application to inmates upon request: Benton, Ferry, Grays Harbor, Jefferson, Skagit, and Thurston. Whatcom County provides eligible inmates with the Medicaid application and assists them with the process. Clark, Mason, and Spokane Counties connect mentally ill offenders to the local RSN upon their release. Adams, Asotin, Chelan, Clallam, Columbia, Cowlitz, Franklin, Garfield, Grant, Island, King, Kitsap, Kittitas, Klickitat, Lewis, Lincoln, Okanogan, Pacific, Pend Oreille, Skamania, Snohomish, Stevens, Wahkiakum, Walla Walla, Whitman, and Yakima Counties do not provide any pre-release planning or Medicaid applications to inmates. San Juan and Douglas Counties each contract their inmates out to neighboring county jails (Island County and Chelan County, respectively).

[29] Dave Stewart, Pierce County RSN, telephone conversation with author, July 2, 2001.

[30] Mark Westin-Haver, Community Services Division, Washington State Department of Social and Health Services, telephone conversation with author, July 30, 2001.

[31] Theodore M. Hammett, Cheryl Roberts, and Sofia Kennedy, "Health-Related Issues in Prisoner Reentry," *Crime & Delinquency* (July 2001): 402.

[32] Shirley Maike, Eastern State Hospital, telephone conversation with author, July 2, 2001; Dan Nelson, Western State Hospital, telephone conversation with author, July 2, 2001.

APPENDIX B: DATA SOURCES

This research was approved by the Washington State Department of Social and Health Services (DSHS) Human Research Review Board. It was also approved by the Research and Evaluation Committee of the King County Department of Community and Health Services, Mental Health, Chemical Abuse and Dependency Services Division.

Data sources include the following:

1. **Atypical Antipsychotic Medication Program Sites:** Harborview, and providers contracting with the Pierce RSN, provided data on program participants, including program enrollment data, client demographics, and psychiatric diagnoses.

2. **DSHS Mental Health Division (MHD):** The MHD provided longitudinal information on public mental health services received by clients. Service utilization records were available from January 1994 through September 2001. They included monthly data on state hospital, community hospital, and emergency/treatment facility days. Data also included monthly community outpatient hours and hours of outpatient medication management services.

3. **Washington State Employment Security Division (ESD):** For unemployment insurance purposes, the ESD keeps a longitudinal file containing the wages and hours of individuals employed in Washington State. Quarterly, employers are required to report total wages earned and hours worked on all employees.

4. **Washington State Institute for Public Policy Criminal Justice Database:** The Institute database is a synthesis of criminal charge information for individuals that is derived using elements of several criminal justice system data sources:
   - Administrative Office of the Courts (AOC) Judicial Information System (includes separate databases for juvenile court, superior court, and the courts of limited jurisdiction);
   - Department of Corrections (DOC) Offender Based Tracking System (OBTS); and
   - Washington State Patrol Identification System (WASIS).

APPENDIX C: OVERVIEW OF LEGISLATION IN OTHER STATES

In addition to Washington, several other states have passed legislation providing funding for medications, including atypical antipsychotics, for underserved populations. This section briefly describes each of those pieces of legislation. The target populations vary among the different state programs as does the amount and type of funding provided. Also, states have varying income and resource level requirements for Medicaid, thus, the definition of an underserved population can vary by state.

Individuals Discharged From State Institutions. The following programs are aimed at providing atypical antipsychotics to individuals exiting care in *state psychiatric hospitals*, who will have no other method of paying for these medications. New York is the only state that includes *correctional facilities*.

- **Florida:** In the 2000 legislative session, a bill was passed providing funding for psychiatric medications, including antipsychotic medications, for individuals discharged from state psychiatric hospitals who are not Medicaid-eligible.[33]

- **Kentucky:** The Second Generation Antipsychotic Replacement Program for Adults (Replacement Program) was established by the Kentucky Department for Mental Health and Mental Retardation Services (Department) in 1999 to provide atypical antipsychotic medications to individuals upon their release from state psychiatric hospitals who had received such medications while institutionalized and had no other means of purchasing them.[34] The program was a policy rather than a legislative decision and, prior to 1999, operated unofficially in the four state psychiatric hospital pharmacies. These pharmacies provided the atypical antipsychotic medications to individuals enrolled in the program, with funding assistance from an appropriation provided by the state legislature. However, because the number of individuals eligible for the program was constantly changing, the program became an unmanageable expense and required a considerable amount of paperwork. In 2001, the Replacement Program was discontinued in three of the four state hospitals. The Department is currently trying to determine how to make the program more efficient so that it might be reinstated in those hospitals where it has been discontinued.

- **New York:** The Medication Grant Program, part of Kendra's Law (which included an appropriation of $40 million) and administered by the New York State Office of Mental Health, went into effect on September 5, 2000, and provides grants for the cost of psychiatric medications and other related services to individuals with a mental illness who leave local jails, state prisons, or state hospitals and have applied for Medicaid.[35] To secure grant monies, localities must provide a plan to improve the timeliness of filing medical assistance applications in addition to other requirements. Individuals involved in

[33] Florida State Legislature, CS for SB 358, 2000 Legislature.
[34] Rose Blandford, "Community Medications Support Program," <http://dmhmrs.chr.state.ky.us/mh/adultservices/prog_08.asp>; and Rose Blandford, Kentucky Department for Mental Health and Mental Retardation Services, telephone conversation with author, July 31, 2001.
[35] Glenn Liebman, "Medication Grant Program," <http://www.omh.state.ny.us/omhweb/Med_Grant/mghome.htm>, November 27, 2000.

the program are given a Medication Grant Card, which can be used at over 3,800 pharmacies across New York State. Once Medicaid eligibility has been determined, the individual is disenrolled from the program.

- **Virginia:** The Discharge Assistance Project is designed for individuals who have been in state psychiatric hospitals for longer than one year and provides a funding stream for an individualized plan of care for each patient. This program utilizes the atypical antipsychotics in the Aftercare Pharmacy to provide these medications to its participants. For fiscal year 2000, the Discharge Assistance Project had a total budget of $12.7 million and served 324 clients.

Low-Income Individuals. Each of the programs described below provides atypical antipsychotics to individuals who have no other method of paying for them.

- **Florida:** In the 2000 legislative session, the bill described previously also created the Indigent Psychiatric Medication Program to provide psychiatric medications for those without Medicaid benefits who do not reside in a state mental health treatment facility or an inpatient unit.

- **Kentucky:** The Kentucky Department for Mental Health and Mental Retardation Services also administers the Community Medication Support Program, which provides psychotropic medications, including atypical antipsychotics, to severely mentally ill and indigent adults who have no other means of purchasing them. The state legislature has appropriated $1.5 million annually to this program since 1998.

- **North Carolina:** The Atypical Medication Fund provides atypical antipsychotic medications for clients of Adult Community Mental Health (of the Division of Mental Health, Developmental Disabilities, and Substance Abuse Services) who could not otherwise afford to purchase them.[36] Community-based public mental health programs can request authorization to provide atypical antipsychotics to clients who have incomes at or below 150 percent of the federal poverty level and who do not have other insurance or Medicaid coverage. These clients have continued eligibility with proportionate increases in their co-payments until their incomes reach 300 percent of poverty level. For fiscal year 2000, the state legislature appropriated $1.6 million to the fund and spends approximately $200 to $300 per month for each enrolled client. Since it is operating at capacity, the Adult Community Mental Health program is currently limiting approval of additional clients to those who have been discharged on a covered medication from one of the state hospitals.

- **Oregon:** In June 2000, the state legislature appropriated $1.9 million to the Mental Health and Developmental Disabilities Services Division to create a pilot program, the Atypical Antipsychotic Medications Project (AAMP), which was scheduled to end December 31, 2001.[37] The AAMP provides for the delivery and evaluation of atypical antipsychotics to individuals who are not otherwise covered by insurance or able to afford them and includes

[36] Bonnie Morell, "Atypical Medication Fund," <http://www.dhhs.state.nc.us/mhddsas/adultmentalhealth/fund.html>.
[37] Douglas A. Bigelow, et al. "Mid-Project Evaluation, The Atypical Antipsychotic Medications Project" (March 12, 2001).

funding for services and management (70 percent of funding is allocated for medications, and 30 percent is allocated for case management).

- **Texas:** Since 1991, the Texas Assembly has appropriated over $90 million to fund atypical antipsychotics for individuals who have received services within the Texas mental health system or in state psychiatric hospitals that meet the diagnostic criteria set by the Department of Mental Health and Mental Retardation.[38] The dispersal of the medications must follow the guidelines of the Texas Medication Algorithm Project.

- **Virginia:** The Aftercare Pharmacy, which provides medications for mental health clinics throughout the state that serve indigent clients, supplies atypical antipsychotics for clients without Medicaid or a third-party resource to pay for the medications.[39] In 1999, $5 million was earmarked by the legislature for the funding of atypical antipsychotics in the Aftercare Pharmacy, and the same appropriation was made the following year. Twenty-five percent of the actual users of atypical antipsychotics in Virginia have their medications provided from this funding source.

[38] Marsha Toprac, Texas Department of Mental Health and Mental Retardation, telephone conversation with author, August 14, 2001; and Tex Killian, Texas Department of Mental Health and Mental Retardation, telephone conversation with author, August 15, 2001.
[39] Jim Martinez, "Discharge Assistance Project," <www.dmhmrsas.state.va.us>, July 2, 2001.

APPENDIX D: GLOBAL ASSESSMENT OF FUNCTIONING SCORE CATEGORIES

The Global Assessment of Functioning (GAF) scale is a standard measure of clinician judgment on an individual's current level of psychosocial functioning.[40] Scores range from zero to 100, with higher scores indicating a higher level of functioning.

Score	
1–10	Persistent danger of severely hurting self or others or persistent inability to maintain minimal personal hygiene or serious suicidal act with clear expectation of death.
11–20	Some danger of hurting self or others or occasionally fails to maintain minimal personal hygiene or gross impairment in communication.
21–30	Behavior is considerably influenced by delusions or hallucinations or serious impairment in communication or judgment or inability to function in almost all areas.
31–40	Some impairment in reality testing or communication (e.g., speech is at times illogical, obscure, or irrelevant) or major impairment in several areas, such as work or school, family relations, judgment, thinking, or mood.
41–50	Serious symptoms (e.g., suicidal ideation, severe obsessional rituals, frequent shoplifting) or any serious impairment in social, occupational, or school functioning (e.g., few friends, conflicts with peers or co-workers).
51–60	Moderate symptoms (e.g., flat effect and circumstantial speech, occasional panic attacks) or moderate difficulty in social, occupational, or school functioning.
61–70	Some mild symptoms (e.g., depressed mood and mild insomnia) or some difficulty in social, occupational, or school functioning (e.g., occasional truancy or theft within the household), but generally functioning pretty well, has some meaningful interpersonal relationships.
71–80	If symptoms are present, they are transient and expectable reactions to psychosocial stressors; no more than slight impairment in social, occupational, or school functioning.
81–90	Absent or minimal symptoms, good functioning in all areas.
91–100	Super functioning in a wide range of activities. No symptoms.

[40] Diagnostic and Statistical Manual of the American Psychiatric Association (4th Edition) (Axis V, DSM-IV).