



Report #6

Alameda County
CalWORKs Needs Assessment
and Outcomes Study

**The Prevalence and Impact of Physical, Mental, and
Behavioral Health Barriers
on Work and Welfare Outcomes over 27 Months**

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ABSTRACT

This three-wave, longitudinal panel study followed a representative sample of adults who received CalWORKs cash benefits in Alameda County, California, in October 1998. Face-to-face interviews were conducted in English, Spanish, or Vietnamese at Baseline, 15 months (Wave 2), and 27 months (Wave 3). Over the course of the study, “full-time” employment nearly doubled from 26 to 47 percent. Receipt of cash welfare and other public assistance declined from 94 to 65 percent. Physical health problems were more prevalent among study participants than mental health, alcohol, illegal drug, or domestic violence problems and also more enduring across the study period. Nevertheless, nearly all of the 25 potential health-related barriers examined declined in prevalence during the study. Most bivariate associations between health problems and work – and all associations with welfare status – evident at Wave 2, had disappeared by Wave 3. A “dose-response” relationship found for the effect of health-related barrier combinations on work and welfare statuses at Wave 2 had disappeared by Wave 3. Controlling for demographic, human capital, family responsibility, and transportation variables in a multivariate analysis, only a single health-related barrier – *two or more functional limitations* – was found to be significantly associated with lack of full-time work at all three interview waves. It appears, then, that with the exception of functional limitations, in this sample *potential* health-related barriers do not constitute *absolute* barriers to full-time employment. Receipt of community-based services for those with a self-acknowledged need for help was lower at Wave 3 compared to Wave 1 for those assessed with a potential alcohol problem or a physical health problem but higher for those with illegal drug and mental health issues. Pressured by impending Federal and State time limits, welfare recipients may find a way to work even in the presence of health-related problems. The longevity of employment under such conditions remains in question, however.

EXECUTIVE SUMMARY

This is the sixth report of the Alameda County CalWORKs Needs Assessment and Outcomes Study, a longitudinal panel study of adults who were recipients of cash CalWORKs (California Work Opportunity and Responsibility to Kids) benefits, California's version of Temporary Aid to Needy Families (TANF), in October 1998. Face-to-face interviews were conducted in English, Spanish, or Vietnamese at Baseline, 15 months (Wave 2), and 27 months (Wave 3). At baseline data collection in 1998 and 1999, 512 individuals participated in a standardized interview to collect information on housing, employment, amount and sources of income and public assistance, family situation and responsibilities, and hypothesized health-related and other barriers to obtaining and maintaining employment and leaving the welfare rolls. At Wave 2 follow-up interviews of 449 of the original study participants assessed statuses on the same key measures in the year 2000. Second and final follow-up interviews of 430 respondents at Wave 3 were conducted in the year 2001.

The primary purpose of the study is to assess the barriers to working among a representative sample of CalWORKs recipients, focusing especially on health-related problems. With the advent of the federal TANF program, signed into law in 1996 and implemented in California beginning in 1998, new requirements for families on welfare were instituted, namely, the requirement to work and a lifetime limit of five years of cash welfare assistance. In light of County concern over the ability of welfare recipients to join the workforce in the face of potential health-related problems like alcohol or drug abuse, as well as other problems (lack of job skills, minimal work history, or problems with child care, transportation, or housing), this study was undertaken to assess the needs of welfare recipients and examine the relationship among needs, services, and outcomes.

This report focuses on the health-related outcomes of the study sample and the association of health statuses with work and welfare outcomes over the 27-month period between baseline and Wave 3 interviews. Specifically, the report addresses the following questions:

- (1) How prevalent are health-related problems among welfare recipients? Are they enduring or transitory?

- (2) Are potential health-related barriers associated with demographic, personal, and family characteristics? Are there any implications for targeted delivery of services?
- (3) To what extent are health-related problems associated with respondents' ability to work?
- (4) What is the relationship between health-related problems and a family's ability to separate from the CalWORKs cash assistance system?
- (5) Do individuals with health-related problems recognize a need for help, and do they seek and receive help?

Main Findings

Prevalence and Stability of Health-Related Barriers

- Physical health problems are by far the most prevalent of health-related problems among current and former welfare recipients. Across the three interview waves, between 55 and 65 percent of study respondents experienced a physical health problem which we hypothesized could constitute a potential barrier to working.
- Mental health problems were experienced by between 33 and 42 percent of study respondents at any given time.
- The least prevalent of health-related problems were possible alcohol and illegal drug use and domestic abuse problems. For each of the three potential problem areas approximately 10 to 15 percent of the respondents were affected at each measurement point.
- The most enduring of health problems are physical health problems, especially two *or more physical health problems, fair to poor health*, and the more global measures of a possible mental health condition – having *many mental health symptoms* and *mental health "case."*
- Overall, the health of study respondents improved over the 27-month study period, as shown by decreases in the prevalences of nearly all of the 25 potential health-related barriers examined from Wave 1 to Wave 3.

Associations of Potential Health-Related Barriers with Demographic, Personal, and Family Characteristics and Implications for Targeted Delivery of Services

- Concurrent with the literature, significant associations were found between male gender and alcohol misuse, binge drinking, and dependence; older age and physical and mental health problems; and lower educational attainment and physical health problems.
- Significant associations were found between drug, alcohol, and domestic abuse problems on the one hand and immigrant status on the other, such that proportionately few immigrants were found to have these problems compared to prevalence rates among non-immigrants. The relatively small numbers of immigrant respondents, however, raises concern about the stability of these statistical associations.
- The relative lack of clustering of health-related problems among specific demographic sub-groups suggests that, for the most part, services do not need to be specially focused for particular sub-populations.

Association of Potential Health-Related Barriers and Work- and Welfare-Related Outcomes at Wave 2 and Wave 3

- Within all domains of health-related barriers – alcohol, other drugs, physical health, mental health, and domestic abuse – significant bivariate associations were found between particular health-related conditions and working full-time at Wave 2, such that individuals with a particular barrier were less likely to be working full-time than individuals without the barrier. Four of five significant associations between health-related conditions and welfare status were of physical health measures.
- At Wave 3, significant bivariate associations with full-time work status were found only for physical health, a few mental health, and one domestic abuse barrier. There was no non-marginal significant relationship evident between health-related barriers and welfare status.
- When the effect of health-related barriers on working full-time is assessed while controlling for demographic, human capital, family responsibility, and transportation variables in multivariate analyses, only a single health-related barrier – *two or more*

functional limitations (such as difficulty walking several blocks or lifting and carrying groceries) – was found to significantly predict lack of full-time work at all three interview waves.

- Logistic barriers – *lack of family child care* and *lack of a car and/or driver’s license* – were at least as predictive of lack of full-time work as was *functional limitations*, at all three waves.
- Among study respondents who were working full-time at Wave 2 but no longer doing so at Wave 3, health-related barriers were *not* found to play a role in explaining the loss of full-time work by Wave 3 in bivariate analyses, except for *two or more functional limitations*, the only health-related variable showing non-marginal statistically significant associations with consistency of full-time work status.
- The findings above suggest that, with the exception of functional limitations, *potential* health-related barriers do not, in fact, constitute *absolute* barriers to full-time employment and leaving welfare, especially in the face of time limits when the motivation to work may be increasing.

Prevalence of Potential Health-Related Barrier Combinations over Time and Associations with Employment and Welfare Outcomes

- As in the case of individual health-related barriers, the prevalence of combinations of health-related barriers (alcohol and/or other drug and/or physical health and/or mental health and/or domestic abuse problems) declined over the course of the study.
- By virtue of the overall higher prevalence of physical health barriers, combinations of barriers involving physical health were also the most prevalent over time, with highest prevalence rates found for the combination of mental health and physical health problems.
- A “dose-response” relationship was found for the effect of barrier combinations on work status at Wave 2: the more health-related barriers, the greater the likelihood of not working. This relationship was no longer evident at Wave 3.
- Being on welfare was associated with barrier combinations involving physical health and alcohol, other drugs, mental health, and domestic abuse at Wave 2, but not at Wave 3.

Need and Use of Behavioral Health, Physical Health, and Domestic Abuse Services, Baseline to Wave 3

- The perception of a need for help varies as a function of the type of potential barrier. Individuals with potential illegal drug use barriers are least likely to report a need for help. Individuals with physical health problems are the most likely to report a need for help.
- The degree to which people who recognized a need for help actually received help varied as a function of the type of potential barrier. Individuals with an illegal drug use barrier, if they reported a need for drug service, were the most likely to receive help. Study participants with a physical health problem were more likely to receive help than study participants with a mental health problem.
- Over the course of the study, access to services for those with a self-acknowledged need for help was lower at Wave 3 compared to Wave 1 for those assessed with a potential alcohol problem or a physical health problem. Assistance with illegal drug use and mental health issues increased from Wave 1 to Wave 3.

Conclusions

Among all the health-related barriers addressed, this study found the strongest link between physical health and work status; namely, the existence of *two or more functional limitations* was found to inhibit the ability to work full-time. The fact that this study did not show a consistent and strong link between other health-related barriers and employment and welfare status does not mean that health is not a factor in determining whether or not an individual works. A number of explanations for the lack of a significant association are possible. First, during the study period case management and other resources were available to promote access to health-related services. Second, the measurement of health-related barriers in this study most often involved inquiring about the existence of a health condition over the past year, while the measurement of work and welfare statuses pertained to the time of interview or the past month. For problems that were enduring and present at the time of interview, past-year prevalence would be expected to be a valid measure of the impact of a health condition on work and welfare status. For problems that were transitory and had passed by the time of interview, the relationship would not be expected to hold as strongly.

Cross-wave analyses also indicated a shift in the observed impact of particular health-related barriers on work and welfare status from Wave 2 to Wave 3. Significant associations that existed between barriers and work and welfare status at Wave 2 were no longer prominent at Wave 3. Furthermore, health-related barriers were, for the most part, not found to be a significant factor in explaining why individuals who were working full-time at Wave 2 were no longer doing so at Wave 3. These results may simply reflect the fact that welfare recipients, when pressured by impending federal and state time limits, can and do find a way to work even in the presence of health-related problems. If this is true, the longevity of employment under such conditions is still a question which can only be answered through longer-term studies of welfare recipients.

1. INTRODUCTION

Overview

The Alameda County CalWORKs Needs Assessment and Outcomes Study is a longitudinal panel study involving three waves of face-to-face interviews over a 27-month period with a representative sample of 512 adults who received CalWORKs cash benefits in Alameda County, California, in October 1998. The study was designed to: (1) identify and monitor over time potential barriers to working among the CalWORKs population, with particular emphasis on health-related barriers, (2) assess associations of barriers to welfare, work, and income outcomes, and (3) determine critical service and treatment elements in CalWORKs training, work-readiness and behavioral health care service programs to assist Alameda County in planning for the service needs of its welfare clients.

In order to be eligible for the study at the time the study sample was drawn, individuals had to (1) be 18 – 59 years of age, (2) speak English, Spanish, or Vietnamese as their primary language (which account for over 90 percent of the welfare cases in Alameda County), (3) be a parent or caregiver in a 1- or 2-parent family, (4) not be a non-needy caretaker, (5) not have a permanent disability, and (6) not be exempt from CalWORKs work requirements.

Baseline (Wave 1) data were collected from 512 individuals between November 1998 and May 1999. First follow-up (Wave 2) interviews with 449 of the original study participants, a response rate of 88 percent, took place 15 months post-baseline, between February and August 2000. Second follow-up (Wave 3) interviews with 430 study participants, a response rate of 84 percent, started February 2001 and were completed August 2001. Interviews were conducted by trained interviewers in English, Spanish, or Vietnamese, in a private place, most often in the respondent's home. Interviews were voluntary, completely confidential, and, at Wave 3, lasted, on average, 70 minutes. At each follow-up, statistical tests were conducted to assure that the representativeness of the original baseline sample had been maintained. The only measured departure from sample comparability across waves was the disproportionate loss of Vietnamese-speaking respondents at Wave 3 (see Dasinger, Speiglmán, & Norris, 2002).

The survey instrument used to conduct the interviews, for the most part, remained consistent across interview waves in order to allow for the assessment of changes over time in key health, work, and welfare indicators. Specially designed to collect information on the needs and welfare reform outcomes of CalWORKs recipients, with a particular focus on health-related issues and problems that may constitute barriers to employment and leaving welfare, the survey addressed the following topics: (1) demographics, education, immigration status, and primary language, (2) housing, household composition, and family relationships, (3) work, income, and welfare activities, (4) hunger and other hardships, (5) need for child care, transportation, health, and other services, and reports of services received, and (6) personal status in key barrier and risk factor areas, including alcohol, tobacco, and other drug use, mental health, physical health, family violence, Child Protective Services (CPS) involvement, and criminality. A series of questions asked about the status of a focal child on the case, chosen at random. The survey questionnaire instrument consisted largely of questions and scales of known reliability and validity developed by other researchers with expertise in their domains of interest (see Speigman, Fujiwara, Norris, & Green, 1999). Most of the survey data elements are unavailable in administrative datasets. The resulting dataset is one of a few nationwide containing information on a wide range of potential risk factors for welfare dependency. Using a similar questionnaire, the Public Health Institute conducted a parallel study of welfare recipients in San Joaquin County, California in 2000 and 2001 (see Norris, Speigman, & Dasinger, 2002; Norris, Dasinger, Miller, & Speigman, 2002). Cross-county comparisons are therefore possible, but are not the subject of this report.

Previous Reports

This is the last of six planned reports from the Alameda County CalWORKs Study. The previously issued reports are available at www.phi.org, the Public Health Institute web site, and, as of this writing, can be found on the “What’s New” page.

Reports 1 through 3 describe the baseline characteristics of the study sample and the baseline prevalence rates for 17 potential barriers to obtaining and maintaining employment and leaving welfare (Speigman, Fujiwara, Norris, & Green, 1999; Green, Fujiwara, Norris,

Kappagoda, Driscoll, & Speiglmán, 2000; Driscoll, Speiglmán, & Norris, 2000).

Report 4 describes the status of respondents at Wave 2 (Dasinger, Miller, Norris, & Speiglmán, 2001), addressing changes from baseline in household incomes, the degree to which individuals identified as experiencing potential health-related barriers to employment were getting the services they needed, the need and receipt of child care services, and the prevalence rates of 17 potential barriers to obtaining and maintaining employment and leaving welfare. Report 4 also reviews Alameda County's implementation of Welfare Reform and the progress of study participants through the prescribed stages of the CalWORKs program.

Report 5 (Dasinger, Speiglmán, & Norris, 2002), like this report, presents findings from the third wave of interviews. Key findings over the course of the study include the following:

- The prevalence of “full-time” employment nearly doubled between Wave 1 and Wave 2, from 26 to 47 percent of study respondents, but remained essentially unchanged from Wave 2 to Wave 3.
- The prevalence of receipt of cash welfare and other public assistance declined from 94 to 65 percent.
- The prevalence of health-related and non-health-related potential barriers to employment declined.
- For most participants, household income rose.
- Receipt of community-based services was generally high for those who indicated need and showed some service-specific increases over the 27-month period.
- Wave 3 respondents with the most barriers were almost twice as likely to be working full-time compared to their Wave 2 counterparts.

Despite indications of progress, Report 5 also notes that movement along the path towards self-sufficiency is slow and does not include all welfare recipients:

- The uptake of CalWORKs-sponsored child care and transportation benefits was low, despite the fact that, in multivariate analyses, child care and transportation barriers were consistently found to be associated with lack of full-time work.

- Although incomes had increased over the study period, most respondent households were still living on incomes well below estimates of what it costs to make ends meet.
- Loss of health insurance coverage became increasingly evident over time, as more study participants departed welfare.
- Positive changes were not necessarily enduring, as respondents moved in and out of employment and different health and non-health barrier statuses.

Report 6

This report addresses the following:

- (1) The prevalence and stability over time of an expanded set of 25 potential health-related barriers to employment and successful welfare departure. Like previous reports, this set includes physical health, mental health, alcohol and drug abuse, and domestic abuse; however, we make finer-grained distinctions within each health domain and include new variables not previously reported.
- (2) The association of potential health-related barriers with other demographic, personal, and family characteristics, in order to discern whether specific barriers are more or less likely to appear among particular sub-populations of CalWORKs recipients.
- (3) The association of potential health-related barriers with work and welfare outcomes.
- (4) The prevalence of health-related barrier combinations over time and their association with work and welfare outcomes.
- (5) The need and use of behavioral and physical health care and domestic abuse services for people with apparent problems, from Wave 1 to Wave 3.

For analyses examining cross-wave prevalence and trends, we utilize the 402 respondents (78% of the Baseline sample) who responded to all three interviews. For associations of potential barriers with work and welfare status at Wave 2 and Wave 3, we use full Wave 2 (N = 449) and Wave 3 (N = 430) samples, respectively.

In the main, study findings are presented in terms of descriptive statistics, namely, means, frequencies, and percentages, so that results are accessible to as wide an audience as possible. Multivariate analysis, in the form of logistic regression, is used to assess the independent contribution of individual potential barriers on work status while controlling for other factors.

Outline of the Report

In addition to this introduction and a conclusion, there are five sections to the report. In the next section, Section 2, we present findings on the prevalence of a range of potential health-related barriers to employment and successful departure from welfare, as well as changes in prevalence and in the status of particular individuals experiencing potential barriers across the three interview waves. We next examine, in Section 3, the association of potential barriers with demographic, personal, and family characteristics. Section 4 focuses on the association of health-related barriers with study respondents' work and welfare status within and across waves. In Section 5 we document the prevalence of barrier combinations and examine their association with employment and welfare outcomes. Finally, in Section 6 we report on the need for and use of behavioral health, physical health, and domestic abuse services.

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2. PREVALENCE AND STABILITY OF POTENTIAL HEALTH-RELATED BARRIERS TO EMPLOYMENT AND SUCCESSFUL DEPARTURE FROM WELFARE

Introduction

In previous reports we conceptualize and describe *potential barriers* ranging in domain from sociodemographic factors to family responsibility, human capital, logistic (transportation, housing), and health-related factors. This report looks in more detail and focuses on 25 health-related potential barriers, including those involving physical and mental health, use of alcohol and illegal drugs, and domestic violence victimization.¹ Table 2-1 defines the 25 measures used.

Prevalence of Health-related Potential Barriers

Potential health-related barriers to successful departure from welfare are widespread among the study group (see Table 2-2). At baseline, two-thirds (64.7%) of the respondents described physical health problems that we categorized as potential barriers to employment. Two-fifths (41.5%) of the sample was assessed as having a potential mental health barrier. One in seven (14.9%) sample members had a history of domestic abuse, and 12.4 percent of the sample had a potential alcohol use barrier. Finally, one in five (20.9%) members of the sample used an illegal drug in the year prior to the baseline interview.

At baseline the prevalence of individual potential barriers ranged from 3.7 percent for past-year other family member violence and 5.5 percent for past year alcohol dependence to 35.1 percent for mental health “case” and 54.7 percent for two or more health problems in the past year.

¹ Report 5 displays information on 19 potential barriers that were *not* defined as health-related (Dasinger, Speiglmann, & Norris, 2002). The non-health-related potential barriers involve areas such as sociodemographics, transportation, child care and other family responsibility, involvement in the criminal justice system, English language skills, educational attainment, work skills, and housing. Although declining from Baseline, the prevalence of non-health-related barriers remained substantial at Wave 3.

**Table 2-1
Definitions of 25 Potential Health-Related Barriers**

Domain	Measure	Definition
Alcohol use	Monthly binge drinking	Drank 5+ drinks at a time once a month or more frequently, past year
	Semi-weekly binge drinking	Drank 5+ drinks at a time two to three times a month or more frequently, past year
	Weekly binge drinking	Drank 5+ drinks at a time one to two times a week or more frequently, past year
	Alcohol dependence	3+ of 9 alcohol dependence symptoms, past year
	Alcohol misuse – narrow definition	BOTH drank 5+ drinks at a time once a month or more frequently AND 3+ of 9 alcohol dependence symptoms, past year
	Alcohol misuse – broad definition	EITHER drank 5+ drinks at a time once a month or more frequently OR 3+ of 9 alcohol dependence symptoms, past year
Illegal drug use	Weekly drug use	Used illegal drugs 1+ times a week, past year
	Frequent drug use	Used illegal drugs 3+ times a week, past year
	Daily drug use	Daily illegal drug use, past year
	Any drug use	Used any illegal drugs or prescription drugs without a prescription, past year
Physical health	2+ health problems	2+ physical health problems in past year (of a possible 21, e.g., sight, hearing, serious heart condition, diabetes)
	2+ health problems interfere	2+ physical health problems in past year (of a possible 21, e.g., sight, hearing, serious heart condition, diabetes) interfered with R's ability to go to work, training, school, or CalWORKs activities
	2+ functional limitations	R limited a lot by health in at least 2 of 10 activities currently (10 items from SF-36 physical functioning scale, e.g., lifting or carrying groceries, walking several blocks) (Ware & Sherbourne, 1992)
	Health fair to poor	Self-rated health fair to poor now (from SF-36, Ware & Sherbourne, 1992)
Mental health	Low vitality	Average score < 2.5 on 5-items measuring level of vitality, energy or fatigue, on a 5-point scale (from SF-36, Ware & Sherbourne, 1992)
	Many mental health symptoms	Many mental health symptoms, last 7 days (based on SCL-90, Derogatis & Cleary, 1977)
	Mental health "case"	Meets clinical cut-off value for probable mental health disorder or problem, based on normative samples, from 54-items measuring level of psychological distress on multiple dimensions (based on SCL-90, Derogatis & Cleary, 1977)
	Depression	Depression, last 7 days (based on normative score on 6 items adapted from the SCL-90, Derogatis & Cleary, 1977)
	Anxiety	Anxiety, last 7 days (based on normative score on 6 items adapted from the SCL-90, Derogatis & Cleary, 1977)
	Somaticization	Somaticization, last 7 days (based on normative score on 7 items adapted from the SCL-90, Derogatis & Cleary, 1977)
	Obsessive-Compulsive	Obsessive-Compulsive, last 7 days (based on normative score on 6 items adapted from the SCL-90, Derogatis & Cleary, 1977)
Domestic abuse	Partner violence	Physically abused by partner/spouse in past year (e.g., hit, slapped, kicked, choked) (adapted from Conflict Tactics Scale, Straus, 1990)
	Other family violence	Physically abused by other household member in past year (e.g., hit, slapped, kicked, choked) (adapted from Conflict Tactics Scale, Straus, 1990)
	Household violence	EITHER physically abused by partner/spouse OR by other household member in past year (adapted from Conflict Tactics Scale, Straus, 1990)
	Partner control	Current or former partner made it difficult to find or keep a job past year (e.g., through guilt, discouragement, refusing support, or harassment)

Between the time of the Wave 1 and Wave 2 interviews, about equal numbers of the potential barrier categories increased and decreased in prevalence. However, the magnitude of decreases outstripped those of increases. Between the Wave 1 and Wave 3 interviews, all but three potential barriers – the narrow alcohol misuse category and the measures of anxiety and somaticization (the presence of physical symptoms associated with anxiety) – declined in prevalence. Alcohol misuse showed no change, and anxiety and somaticization increased only slightly.

While decreases in the prevalence of potential health-related barriers tended to be small – the largest was 9.9 percentage points (2 or more health problems) followed by 7.2 percentage points (mental health case) – when expressed as a proportionate decline, some were quite substantial. For example, daily drug use in the past year declined from 7.0 percent at Baseline to 5.5 percent at Wave 3, an absolute change of only 1.5 percentage points but a proportionate drop of one-fifth. Similarly, the 5.2-point decline in prevalence of low scores on the vitality measure constituted a drop of almost one-third, much like the decline in prevalence of study participants scoring as depressed. Decreases in the prevalence of other physical and mental health problems were also sizeable, especially in light of the baseline prevalence figures. The same held true for measures of partner abuse, each of which dropped substantially.

Table 2-2

Prevalence of 25 Potential Health-Related Barriers, Waves 1 to 3 (N=402)

	Wave 1		W1-W2	Wave 2		W2-W3	Wave 3		W1-W3
	%	N	+/-	%	N	+/-	%	N	+/-
Alcohol use									
Monthly binge drinking	10.9	44	1.8	12.7	51	-3.0	9.7	39	-1.2
Semi-weekly binge drnkg	7.7	31	2.7	10.4	42	-2.9	7.5	30	-0.2
Weekly binge drinking	6.2	25	0.3	6.5	26	-2.3	4.2	17	-2.0
Alcohol dependence	5.5	22	2.0	7.5	30	-2.3	5.2	21	-0.3
Alcohol misuse – narrow	4.0	16	0.7	4.7	19	-0.7	4.0	16	0.0
Alcohol misuse – broad	12.4	50	3.0	15.4	62	-4.5	10.9	44	-1.5
Illegal drug use									
Weekly drug use	12.4	50	-1.7	10.7	43	-1.2	9.5	38	-2.9
Frequent drug use	8.0	32	0.5	8.5	34	-1.8	6.7	27	-1.3
Daily drug use	7.0	28	-0.8	6.2	25	-0.7	5.5	22	-1.5
Any drug use	20.9	84	-4.0	16.9	68	2.3	19.2	77	-1.7
Physical health									
2+ health problems	54.7	220	-3.7	51.0	205	-6.2	44.8	180	-9.9
2+ health probs interfere	23.4	94	0.5	23.9	96	-5.0	18.9	76	-4.5
2+ functional limitations	22.6	91	0.8	23.4	94	-5.0	18.4	74	-4.2
Health fair to poor	31.6	127	-2.7	28.9	116	-2.5	26.4	106	-5.2
Any physical health	64.7	260	-1.5	63.2	254	-7.5	55.7	224	-9.0
Mental health									
Low vitality	16.4	66	-2.2	14.2	57	-3.0	11.2	45	-5.2
Many mental health sympts	18.4	74	0.5	18.9	76	-1.7	17.2	69	-1.2
Mental health “case”	35.1	141	-5.7	29.4	118	-1.5	27.9	112	-7.2
Depression	13.9	56	-2.5	11.4	46	-1.9	9.5	38	-4.4
Anxiety	11.9	48	0.8	12.7	51	0.0	12.7	51	0.8
Somaticization	15.2	61	1.5	16.7	67	-0.3	16.4	66	1.2
Obsessive-Compulsive	20.6	83	0.3	20.9	84	-4.5	16.4	66	-4.2
Any mental health	41.5	167	-5.4	36.1	145	-3.5	32.6	131	-8.9
Domestic abuse									
Partner violence	5.7	23	-0.2	5.5	22	-1.0	4.5	18	-1.2
Other family violence	3.7	15	-1.7	2.0	8	0.7	2.7	11	-1.0
Household violence	8.5	34	-1.3	7.2	29	-1.0	6.2	25	-2.3
Partner control	9.7	39	-2.7	7.0	28	-1.0	6.0	24	-3.7
Any domestic abuse	14.9	60	-3.5	11.4	46	-0.5	10.9	44	-4.0

Stability of Barriers

Table 2-3 expands on the information in Table 2-2 in terms of the picture of the prevalence of potential barriers. The table shows the percentage of respondents ever experiencing each potential barrier at any of the three waves and the percentage of respondents experiencing each potential barrier at all three waves, twice, or only once. The figures are expressed as a percentage of the total sample interviewed at all three waves (N = 402), and as a percentage of the number ever experiencing each particular barrier (columns labeled “% exp.”).

Looking across the three waves of data collection, the 25 potential barriers that we monitored were found to be even more pervasive when the entire 27-month study period is taken into account. For example, at Baseline we report a 54.7 percent prevalence of two or more health problems, and a 35.1 percent prevalence for mental health “case” (see Table 2-2). In both cases, the proportion of study participants having these potential barriers *at least once* in the 27-month study is almost one-third higher. Table 2-3 reports that 70.6 percent of respondents *ever* reported two or more health problems during the three-wave study, and 47.8 percent were *ever* assessed as a mental health “case.”

However, while a large number of respondents were found to experience many of the potential barriers at least once, in *most* cases the majority of those assessed as having the potential barrier were so-assessed at *only one* interview. For example, while 18.2 percent of respondents ever reported semi-weekly binge drinking, in two-thirds of those cases the report was at one wave only. Similarly, 22.9 percent of the sample met the alcohol misuse (broad) criterion *at least once*, but half of those respondents met the criterion *only once*. A similar distribution, with about half or more of respondents having the potential barrier at only one wave, is evident for all measures of alcohol use, illegal drug use, and domestic abuse, and for half of the measures of physical health and for five of seven measures of mental health. It is remarkable that potential barrier categories such as weekly binge drinking, alcohol dependence, daily drug use, low vitality, depression, and the domestic abuse categories are episodic.²

² Instability in these measurements may reflect changed lives and behavior – in part in response to the demands of Welfare Reform – and also in response to changed relationships between respondents and interviewers. It is

A different picture emerges for several of the physical and mental health barrier categories, including two or more health problems, health fair to poor, many mental health symptoms, and mental health “case.” For each of those potential barriers, more than half the study respondents assessed as having the potential barrier were so-assessed at least twice.

possible that a greater sense of ease with the interviewers, rather than changed behavior, is reflected in upward changes in prevalence at Wave 2, while changed behavior dominates the picture at Wave 3.

**Table 2-3
Stability of 25 Potential Health-Related Barriers, Waves 1 to 3 (N=402)**

	Ever experienced barrier (N)		Experienced barriers all 3 waves		Experienced barriers two waves		Experienced barrier one wave	
	% total	N	% total	N	% total	N	% total	N
Alcohol use								
Monthly binge drinking	20.9%	84	3.2%	13	6.0%	24	11.7%	47
Semi-weekly binge drinking	18.2%	73	1.5%	6	4.5%	18	12.2%	49
Weekly binge drinking	12.7%	51	1.2%	5	1.7%	7	9.7%	39
Alcohol dependence	11.7%	47	1.2%	5	4.0%	16	6.5%	26
Alcohol misuse – narrow	9.0%	36	0.7%	3	2.2%	9	6.0%	24
Alcohol misuse – broad	22.9%	92	4.5%	18	7.0%	28	11.4%	46
Illegal drug use								
Weekly drug use	20.6%	83	3.2%	13	5.5%	22	11.9%	48
Frequent drug use	15.7%	63	1.7%	7	4.0%	16	10.0%	40
Daily drug use	13.2%	53	1.2%	5	3.0%	12	9.0%	36
Any drug use	32.6%	131	7.7%	31	9.0%	36	15.9%	64
Physical health								
2+ health problems	70.6%	284	29.6%	119	20.6%	83	20.4%	82
2+ health problems interfere	39.1%	157	9.0%	36	9.2%	37	20.9%	84
2+ functional limitations	38.6%	155	7.7%	31	10.4%	42	20.4%	82
Health fair to poor	47.0%	189	12.7%	51	14.4%	58	19.9%	80

Table 2-3, cont.

	Ever experienced barrier		Experienced barriers all 3 waves		Experienced barriers two waves		Experienced barrier one wave	
	% total	(N)	% total	% exp.	% total	% exp.	% total	% exp.
Mental health								
Low vitality	27.1%	109	4.0%	14.7%	6.7%	24.8%	16.4%	60.6%
Many mental health symptoms	29.4%	118	8.0%	27.1%	9.2%	31.4%	12.2%	41.5%
Mental health "case"	47.8%	192	15.7%	32.8%	13.2%	27.6%	18.9%	39.6%
Depression	22.4%	90	3.2%	14.4%	6.0%	26.7%	13.2%	58.9%
Anxiety	23.4%	94	3.0%	12.8%	8.0%	34.0%	12.4%	53.2%
Somaticization	29.1%	117	6.0%	20.5%	7.2%	24.8%	15.9%	54.7%
Obsessive-Compulsive	33.3%	134	8.2%	24.6%	8.2%	24.6%	16.9%	50.7%
Domestic abuse								
Partner violence	10.7%	43	0.7%	7.0%	3.5%	32.6%	6.5%	60.5%
Other family violence	7.5%	30	0.5%	6.7%	0.0%	0.0%	7.0%	93.3%
Household violence	14.9%	60	1.5%	10.0%	4.0%	26.7%	9.5%	63.3%
Partner control	17.9%	72	0.5%	2.8%	3.7%	20.8%	13.7%	76.4%

Summary

- Physical health problems are by far the most prevalent of health-related problems among current and former welfare recipients. Across the three interview waves, between 55 and 65 percent of study respondents experienced a physical health problem which we hypothesized could constitute a potential barrier to working.
- Mental health problems were experienced by between 33 and 42 percent of study respondents at any given time.
- The least prevalent of health-related problems were possible alcohol and illegal drug use and domestic abuse problems. For each of the three potential problem areas, approximately 10 to 15 percent of the respondents were affected at each measurement point.
- Overall, the health of study respondents improved over the 27-month study period, as shown by decreases in the prevalences of nearly all of the 25 potential health-related barriers from Wave 1 to Wave 3.
- The largest decreases in prevalence – in terms of absolute magnitude – were seen for physical health and mental health barriers, which also showed higher prevalence overall among the study sample compared to alcohol, illegal drug, and domestic abuse barriers.
- At the individual level, some kinds of barriers were more likely to persist over time than others, namely, *two or more physical health problems*, *fair to poor health*, and the more global measures of a possible mental health problem – having *many mental health symptoms* and *mental health “case.”*
- Somewhat surprisingly, behavioral health conditions that would seem resistive to change – the alcohol and illegal drug misuse barriers – did not endure over time for individuals who were assessed as having these potential barriers. In contrast to physical and mental health problems, this may be due to the fact that the maintenance of these behaviors requires financial resources. In the face of job loss and/or low financial resources, these behaviors would be difficult to continue over long periods of time.

- The fact that the participants in this study transitioned in and out of health states which have the potential to adversely affect the ability to obtain and maintain employment has implications for the provision of health-related supports and assistance. On the one hand, it suggests an ever-changing pool of individuals who may be in need of assistance at any given point in time; on the other hand, it suggests that some health-related conditions may, with or without receipt of services, tend to resolve themselves. That is, certain problems may be transient and/or some individuals may have the resources to seek treatment or other services to overcome the conditions.

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3. ASSOCIATION OF POTENTIAL HEALTH-RELATED BARRIERS WITH DEMOGRAPHIC, PERSONAL, AND FAMILY CHARACTERISTICS

From the previous sections we know that many health-related, potential barriers are prevalent, though often transient, among the study population. In this section we inquire as to whether the potential barriers are randomly dispersed among study respondents or, alternatively, associated with particular demographic, personal, or family characteristics. For twenty potential health-related barriers among the 430 Wave 3 study respondents, we examine associations with nine descriptive characteristics of respondents: gender, age, race/ethnicity/nationality, interview language, immigration status, time on welfare at baseline, possession of a high school diploma or GED certificate, family living situation, and whether living in a couple or not.

Significant associations are determined by use of the chi-square measure of the strength of an association. To promote valid results, we conservatively required that the expected frequency of each cell of a chi-square be at least ten. Thus, for example, to study a two-level variable such as gender, when there are cells reporting prevalence for respondents both with and without the potential barrier, an N of 20 (2×10) for the number of individuals experiencing the barrier is required.

The following table summarizes minimum numbers of respondents for various levels of demographics variables.

Number of levels of demographic variable		Minimum N of respondents with the barrier
2	2×10	20
3	3×10	30
4	4×10	40
5	5×10	50
6	6×10	60

Tables 3-1 to 3-6 show the percentage of individuals experiencing each of 20 potential health-related variables at each level of the nine demographic variables. Because of sample size limitations, and the influence of low-prevalence potential barriers, blank cells appear in all but one of these tables. We exclude four variables entirely from the tables, because fewer than 20 people experienced the barrier at Wave 3. These are: *weekly binge drinking*, *alcohol misuse – narrow*, *partner violence*, and *other family violence*.

Alcohol Barriers. Table 3-1 demonstrates that the four alcohol barriers are significantly more prevalent among males, as opposed to females. For example, while 22.6 percent of the male respondents were defined as having the *broad measure of alcohol misuse*, that potential barrier was found at less than half the frequency among females (9.8%). Two of the four measures also demonstrated negative associations with immigrant status, one only marginally, however. In other words, immigrants were less likely to have an alcohol problem than non-immigrants.³ No relationship was found between the potential alcohol barriers and the other seven demographic, personal, and family characteristic measures.

Other Drug Barriers. The gender differences do not appear with reference to other drug barriers (Table 3-2). Immigrants compared to non-immigrants, however, are significantly less likely to be involved in drug use. Additionally, respondents who at baseline had been on welfare no more than two years, compared to those who had received welfare for a longer period of time, were less likely to have a potential other drug barrier, as measured by *daily drug use* and, marginally, *frequent drug use*. There was marginal evidence that respondents without a high school diploma or a GED certificate were more likely to be frequent drug users. As far as *any drug use* in the past year is concerned, age less than 45 years, white, English-speaking, and living with adult non-relatives or cohabiting were associated with a greater likelihood of *any illegal drug use*.

Physical Health Barriers. In terms of potential physical health barriers, significant differences appear in four areas (Table 3-3). Older, compared to younger, respondents were significantly more likely to have such barriers as measured by the presence of *two or more health problems*; *two or more health problems that interfere with work, training, school, or*

³ In this and the other associations with immigrant status, numbers of immigrant respondents are small, and statistical associations may therefore be unstable.

CalWORKs activities; two or more functional limitations; and self-rated health fair to poor. White and Latino, compared to Vietnamese, African American, and Other respondents were more likely to have *two or more health problems*. Respondents interviewed in Spanish and English were more likely to have *two or more health problems*, and, marginally, *two or more functional limitations*, compared to respondents interviewed in Vietnamese. Finally, respondents lacking a high school diploma or GED were significantly more likely to be assessed as having *two or more health problems* or *health rated as fair to poor*.

Mental Health Barriers. In Tables 3-4 and 3-5 we find marginal evidence that males are more likely than females to be *mental health “cases.”* Potential barriers measured by *low vitality, many mental health symptoms, anxiety, somaticization, and obsessive-compulsivity* are significantly associated with older age. *Mental health “case”* is most prevalent among those interviewed in English, compared to those interviewed in Spanish and Vietnamese. *Somaticization* is more prevalent among non-immigrants, compared with immigrants. Finally, *many mental health symptoms* is most prevalent among respondents living with adult non-relatives and least prevalent among those living with parents or grandparents.

Domestic abuse. *Household violence*, and to a lesser extent *partner control*, appear among significantly fewer immigrants, compared to non-immigrants.

**Table 3-1
Association of Potential Alcohol Barriers
with Demographic Characteristics at Wave 3 (N=430)**

	Monthly binge drinking			Semi-weekly binge drinking			Alcohol dependence			Alcohol misuse – broad definition		
	%	N	p	%	N	P	%	N	p	%	N	p
Gender												
Female	8.5	34	***	6.3	25	***	4.3	17	***	9.8	39	**
Male	22.6	7		22.6	7		16.1	5		22.6	7	
Age												
< 45 years	10.2	38	NS	7.8	29	NS	5.7	21	NS	11.6	43	NS
≥ 45 years	5.1	3		5.1	3		1.7	1		5.1	3	
Race												
African American	--	--	--	--	--	--	--	--	--	--	--	--
White	--	--		--	--		--	--		--	--	
Latina/o	--	--		--	--		--	--		--	--	
Vietnamese	--	--		--	--		--	--		--	--	
Other	--	--		--	--		--	--		--	--	
Interview Language												
English	10.1	40	NS	7.8	31	NS	--	--	--	11.4	45	NS
Vietnamese	4.2	1		4.2	1		--	--		4.2	1	
Spanish	0.0	0		0.0	0		--	--		0.0	0	
Immigrant												
Yes	3.1	2	**	3.1	2	NS	3.1	2	NS	4.6	3	*
No	10.7	39		8.2	30		5.5	20		11.8	43	
Time on welfare at baseline												
≤ 2 years	9.2	12	NS	6.9	9	NS	5.3	7	NS	11.5	15	NS
> 2 years	9.7	29		7.7	23		5.0	15		10.4	31	
HS Diploma/GED												
Yes	8.6	24	NS	7.1	20	NS	4.6	13	NS	10.0	28	NS
No	11.3	17		8.0	12		6.0	9		12.0	18	
Living Situation												
Solo Parent	--	--	--	--	--	--	--	--	--	--	--	--
W/(Grand)parent	--	--		--	--		--	--		--	--	
W/Other relatives	--	--		--	--		--	--		--	--	
W/Adult non-relatives.	--	--		--	--		--	--		--	--	
Cohabiting	--	--		--	--		--	--		--	--	
W/Spouse	--	--		--	--		--	--		--	--	
Coupled												
Yes	10.9	13	NS	8.4	10	NS	4.2	5	NS	3.3	14	NS
No	9.0	28		7.1	22		5.5	17		7.4	32	

*p < 0.10 **p < 0.05 ***p < 0.01 ****p < 0.001 *****p < 0.0001

**Table 3-2
Association of Potential Other Drug Barriers
with Demographic Characteristics at Wave 3 (N=430)**

	Weekly Drug Use			Frequent Drug Use			Daily Drug Use			Any Drug Use		
	%	N	p	%	N	p	%	N	p	%	N	p
Gender												
Female	9.3	37	NS	6.5	26	NS	5.5	22	NS	18.0	72	NS
Male	12.9	4		12.9	4		6.5	2		25.8	8	
Age												
< 45 years	10.0	37	NS	7.5	28	NS	5.9	22	NS	19.9	74	*
≥ 45 years	6.8	4		3.4	2		3.4	2		10.2	6	
Race												
African American	--	--	--	--	--	--	--	--	--	18.5	45	*
White	--	--		--	--		--	--		26.7	16	
Latina/o	--	--		--	--		--	--		20.0	9	
Vietnamese	--	--		--	--		--	--		0.0	0	
Other	--	--		--	--		--	--		18.2	10	
Interview Language												
English	10.4	41	NS	--	--	--	--	--	--	20.2	80	**
Vietnamese	0.0	0		--	--		--	--		0.0	0	
Spanish	0.0	0		--	--		--	--		0.0	0	
Immigrant												
Yes	0.0	0	***	0.0	0	**	0.0	0	**	1.5	1	*****
No	11.2	41		8.2	30		6.6	24		21.6	79	
Time on welfare at baseline												
≤ 2 years	7.6	10	NS	3.8	5	*	2.3	3	**	19.1	25	NS
> 2 years	10.4	31		8.4	25		7.0	21		18.4	55	
HS Diploma/GED												
Yes	8.6	24	NS	5.4	15	*	5.0	14	NS	17.1	48	NS
No	11.3	17		10.0	15		6.7	10		21.3	32	
Living Situation												
Solo Parent	--	--	--	--	--	--	--	--	--	11.9	18	*****
W/(Grand)parent	--	--		--	--		--	--		26.8	19	
W/Other relatives	--	--		--	--		--	--		13.0	9	
W/Adult non-relatives.	--	--		--	--		--	--		40.0	12	
Cohabiting	--	--		--	--		--	--		35.7	20	
W/Spouse	--	--		--	--		--	--		9.5	6	
Coupled												
Yes	12.6	15	NS	8.8	10	NS	6.7	8	NS	21.8	26	NS
No	8.4	26		6.4	20		5.1	16		17.4	54	

*p < 0.10 **p < 0.05 ***p < 0.01 ****p < 0.001 *****p < 0.0001

**Table 3-3
Association of Potential Physical Health Barriers
with Demographic Characteristics at Wave 3 (N=430)**

	2+ Health Problems			2+ Health Problems Interfere			2+ Functional Limitations			Health Fair to Poor		
	%	N	p	%	N	p	%	N	p	%	N	p
Gender												
Female	46.1	184	NS	19.0	76	NS	20.1	80	NS	27.6	110	NS
Male	45.2	14		22.6	7		16.1	5		19.4	6	
Age												
< 45 years	42.0	156	*****	16.7	62	****	16.4	61	*****	24.3	90	****
≥ 45 years	71.2	42		35.6	21		40.7	24		44.1	26	
Race												
African American	40.7	99	*****	17.3	42	NS	19.3	47	NS	23.9	58	**
White	65.0	39		25.0	15		25.0	15		30.0	18	
Latina/o	64.4	29		28.9	13		24.4	11		42.2	19	
Vietnamese	18.5	5		7.4	2		7.4	2		37.0	10	
Other	47.3	26		20.0	11		18.2	10		20.0	11	
Interview Language												
English	46.7	185	***	20.2	80	NS	19.9	79	*	26.0	103	NS
Vietnamese	20.8	5		8.3	2		8.3	2		41.7	10	
Spanish	80.0	8		10.0	1		40.0	4		30.0	3	
Immigrant												
Yes	38.5	25	NS	12.3	8	NS	18.5	12	NS	29.2	19	NS
No	47.4	173		20.5	75		20.0	73		26.6	97	
Time on welfare at baseline												
≤ 2 years	47.3	62	NS	17.6	23	NS	20.6	27	NS	26.7	35	NS
> 2 years	45.5	136		20.1	60		19.4	58		27.1	81	
HS Diploma/GED												
Yes	40.7	114	***	18.6	52	NS	18.6	52	NS	22.9	64	***
No	56.0	84		20.7	31		22.0	33		34.7	52	
Living Situation												
Solo Parent	41.7	63	NS	17.2	26	NS	18.5	28	NS	23.8	36	NS
w/(Grand)parent	39.4	28		18.3	13		16.9	12		28.2	20	
w/Other relatives	56.5	39		27.5	19		29.0	20		34.8	24	
w/Adult non-relatives.	60.0	12		20.0	4		20.0	4		25.0	5	
Cohabiting w/Spouse	42.9	24		10.7	6		10.7	6		19.6	11	
	50.8	32		23.8	15		23.8	15		31.7	20	
Coupled												
Yes	47.1	56	NS	17.6	21	NS	17.6	21	NS	26.1	31	NS
No	45.7	142		19.9	62		20.6	64		27.3	85	

*p < 0.10 **p < 0.05 ***p < 0.01 ****p < 0.001 *****p < 0.0001

Table 3-4
Association of Potential Mental Health Barriers
with Demographic Characteristics at Wave 3 (N=430)

	Low Vitality			Many Mental Health Symptoms			Mental Health "Case"		
	%	N	p	%	N	p	%	N	p
Gender									
Female	11.8	47	NS	17.3	69	NS	26.6	106	*
Male	9.7	3		16.1	5		41.9	13	
Age									
< 45 years	10.0	37	***	15.6	58	**	26.4	98	NS
≥ 45 years	22.0	13		27.6	16		35.6	21	
Race									
African American	--	--	--	18.5	45	NS	29.6	72	NS
White	--	--		15.0	9		30.0	18	
Latina/o	--	--		18.2	8		24.4	11	
Vietnamese	--	--		7.4	2		11.1	3	
Other	--	--		18.2	10		27.3	15	
Interview Language									
English	12.1	48	NS	18.2	72	NS	29.5	117	**
Vietnamese	8.3	2		4.2	1		4.2	1	
Spanish	0.0	0		11.1	1		10.0	1	
Immigrant									
Yes	6.2	4	NS	12.5	8	NS	20.0	13	NS
No	12.6	46		18.1	66		29.0	106	
Time on welfare at baseline									
≤ 2 years	12.2	16	NS	17.7	23	NS	29.8	39	NS
> 2 years	11.4	34		17.1	51		26.8	80	
HS Diploma/GED									
Yes	12.5	35	NS	15.4	43	NS	25.7	72	NS
No	10.0	15		20.8	31		31.3	47	
Living Situation									
Solo Parent	--	--	--	17.2	26	***	30.5	46	NS
W/(Grand)parent	--	--		8.5	6		21.1	15	
W/Other relatives	--	--		23.2	16		29.0	20	
W/Adult non-relativs.	--	--		42.1	8		40.0	8	
Cohabiting	--	--		17.9	10		30.4	17	
W/Spouse	--	--		12.7	8		20.6	13	
Coupled									
Yes	11.8	14	NS	15.1	18	NS	25.2	30	NS
No	11.6	36		18.1	56		28.6	89	

*p < 0.10 **p < 0.05 ***p < 0.01 ****p < 0.001 *****p < 0.0001

Table 3-5
Association of Potential Specific Mental Health Disorder Barriers
with Demographic Characteristics at Wave 3 (N=430)

	Depression			Anxiety			Somaticization			Obsessive-Compulsive		
	%	N	p	%	N	p	%	N	p	%	N	p
Gender												
Female	9.5	38	NS	13.5	54	NS	17.0	68	NS	16.5	66	NS
Male	16.1	5		9.7	3		16.1	5		12.9	4	
Age												
< 45 years	9.7	36	NS	11.9	44	**	15.1	56	***	14.3	53	***
≥ 45 years	11.9	7		22.0	13		28.8	17		28.8	17	
Race												
African American	--	--	--	12.3	30	NS	16.5	40	NS	15.2	37	NS
White	--	--		10.0	6		25.0	15		18.3	11	
Latina/o	--	--		22.2	10		15.6	7		17.8	8	
Vietnamese	--	--		3.7	1		3.7	1		7.4	2	
Other	--	--		18.2	10		18.2	10		21.8	12	
Interview Language												
English	10.9	43	NS	14.1	56	NS	17.9	71	NS	17.2	68	NS
Vietnamese	0.0	0		1.8	1		4.2	1		4.2	1	
Spanish	0.0	0		0.0	0		10.0	1		10.0	1	
Immigrant												
Yes	4.6	3	NS	7.7	5	NS	7.7	5	**	16.9	11	NS
No	11.0	40		14.2	52		18.6	68		16.2	59	
Time on welfare at baseline												
≤ 2 years	11.5	15	NS	10.7	14	NS	16.0	21	NS	14.5	19	NS
> 2 years	9.4	28		14.4	43		17.4	52		17.1	51	
HS Diploma/GED												
Yes	8.6	24	NS	11.8	33	NS	15.7	44	NS	14.3	40	NS
No	12.7	19		16.0	24		19.3	29		20.0	30	
Living Situation												
Solo Parent	--	--	--	--	--	--	18.5	28	NS	17.2	26	NS
W/(Grand)parent	--	--		--	--		9.9	7		14.1	10	
W/Other relatives	--	--		--	--		24.6	17		20.3	14	
W/Adult non-relatives	--	--		--	--		25.0	5		15.0	3	
Cohabiting	--	--		--	--		16.1	9		12.5	7	
W/Spouse	--	--		--	--		11.1	7		15.9	10	
Coupled												
Yes	10.1	12	NS	11.8	14	NS	13.4	16	NS	14.3	17	NS
No	10.0	31		13.8	43		18.3	57		17.0	53	

*p < 0.10 **p < 0.05 ***p < 0.01 ****p < 0.001 *****p < 0.0001

Table 3-6
Association of Potential Domestic Abuse Barriers
with Demographic Characteristics at Wave 3 (N=430)

	Household Violence			Partner Control		
	%	N	p	%	N	P
Gender						
Female	6.0	24	NS	6.0	24	NS
Male	6.5	2		6.5	2	
Age						
< 45 years	5.7	21	NS	6.2	23	NS
≥ 45 years	8.5	5		5.1	3	
Race						
African American	--	--	--	--	--	--
White	--	--		--	--	
Latina/o	--	--		--	--	
Vietnamese	--	--		--	--	
Other	--	--		--	--	
Interview Language						
English	--	--	--	--	--	--
Vietnamese	--	--		--	--	
Spanish	--	--		--	--	
Immigrant						
Yes	0.0	0	**	1.5	1	*
No	7.1	26		6.8	25	
Time on welfare at baseline						
≤ 2 years	7.6	10	NS	4.6	6	NS
> 2 years	5.4	16		6.7	20	
HS Diploma/GED						
Yes	7.1	20	NS	6.1	17	NS
No	4.0	6		6.0	9	
Living Situation						
Solo Parent	--	--	--	--	--	--
W/(Grand)parents	--	--		--	--	
W/Other relatives	--	--		--	--	
W/Adult non-relativs.	--	--		--	--	
Cohabiting	--	--		--	--	
W/Spouse	--	--		--	--	
Coupled						
Yes	6.7	8	NS	6.7	8	NS
No	5.8	18		5.8	18	

*p < 0.10 **p < 0.05 ***p < 0.01 ****p < 0.001 *****p < 0.0001

Summary

A number of demographic characteristics were found to be associated with a greater or lesser likelihood of experiencing specific kinds or domains of potential health-related barriers:

- Gender is a significant predictor of potential alcohol problems, which are more common among men than among women.
- Immigrants, as opposed to non-immigrants, are less likely to have an alcohol problem, a drug problem, or a domestic abuse problem.
- Older age is associated with a greater likelihood of a physical health problem or a mental health problem.
- Lower educational attainment, as measured by the lack of a high school diploma or GED certificate, is associated with a greater likelihood of *two or more physical health problems or fair to poor health*.

For the most part, the observed associations are neither surprising (the association between older age and poorer physical health) nor represent new findings (the association between low educational attainment and poorer health). However, these findings may serve to inform the County on the appropriate design and targeting of services. For example, behavioral health services for individuals with alcohol problems may need to take into account gender differences in the manifestation of disease. The findings are just as important for what they don't show as for what they do show. For example, the need for alcohol, drug, and domestic violence programs specially geared toward immigrant populations appears to be low, given the fact that immigrants were less likely to experience such problems.

4. ASSOCIATION OF POTENTIAL HEALTH-RELATED BARRIERS AND WORK AND WELFARE-RELATED OUTCOMES AT WAVE 2 AND WAVE 3

Introduction

Report 5 discusses at some length the complex relationship between barriers and work and welfare (Dasinger, Speiglmán, & Norris, 2002). This section of Report 6 extends the understanding of these relationships by focusing more intensively on health-related barriers. We begin this section by reviewing the information from Report 5 on the prevalence of work and welfare receipt. Then, we present findings on the association of potential health-related barriers with work and welfare status at Waves 1, 2, and 3, using descriptive and multivariate analysis techniques.

Work and Welfare Status

Work. At Wave 1, 25.9 percent of the 402-person sample followed at all three waves was working 26 or more hours a week, the CalWORKs goal at that point for minimum number of hours of work. At Wave 2, 44.5 percent of the sample was working the then-requisite 32 hours a week. At Wave 3, with the hourly work requirement remaining at 32, the proportion of respondents working at that level increased only two percent in absolute terms, to 46.5 percent (see Report 5, Table 3-1). The prevalence of *part-time workers* (less than 26 hours at Wave 1; less than 32 hours at Waves 2 and 3) remained steady throughout the study period, moving from 12.7 percent at Wave 1 to 10.4 at Wave 2 and back to 12.7 percent at Wave 3. Overall, the number of hours respondents usually worked per week doubled between Baseline and Wave 3, from 11.6 to 22.7 hours.

Welfare. We scored study participants as “on welfare” if either they or their children received cash benefits from the CalWORKs program within the 30 days prior to the interview. The prevalence of respondents on welfare declined by one-third from the Wave 1 level of 89.3 percent to the Wave 2 level of 59.0 percent, and by another one-fifth to the Wave 3 level of 47.0 percent, an absolute change of 42.3 percentage points from Wave 1 to Wave 3. As summarized in Report 5 (Figure 3-1), between Waves 2 and 3 the number of respondents in the least successful situation – *on* welfare but not working at all – dropped seven percentage points, from 36.1 to 29.1 percent of the sample. At the other social policy

extreme, during the same period, from Wave 2 to Wave 3, the proportion of respondents *off* welfare and working 32 or more hours per week jumped from 28.6 to 36.1 percent. The proportion *on* welfare and working 32+ hours dropped substantially, from 15.9 to 10.4 percent. Meanwhile, although the numbers are relatively small, worrisome increases were evident in the one-third increase in the proportion of respondents *off* welfare and not working (9.0 to 11.7%).

Explanations for Not Working

In Report 5 we found that almost one-third of those working 32 or more hours per week at Wave 2 were no longer reported working full-time at Wave 3. Respondents provided many explanations for why, at Wave 3, they were not working at least 32 hours. Many respondents provided job-related reasons for no longer working full time, including that full-time work became unavailable, they experienced lay-off or firing, or they lacked interest in full-time work or the minimal wages provided. Respondents also mentioned a desire or need to stay home with a child or other family member, personal transitions, difficulty relying on a relative for child care, older age, relocation to a new area, lack of stable housing, and involvement in CalWORKs activities. However, the most common reason for change in employment status was lack of available full-time work.

Association between Potential Health-related Barriers and Work

Different hypothetical explanations for not working appear when we shift our focus from individual explanations for not working to group associations with potential health-related barriers.

Table 4-1 summarizes the association of health-related potential barriers and work. For each potential barrier, this table shows the percentage of respondents *with* the barrier who were working 32 or more hours per week versus the percentage *without* the barrier who were working 32 or more hours per week. Substantial change took place between Wave 2 and Wave 3.

Alcohol. None of the six alcohol measures, each of which showed at least a marginally significant association with work status at Wave 2, remained significantly associated with

work status at Wave 3. This is most evident with regard to the *narrow measure of alcohol misuse*. At Wave 2, 5.0 percent of study participants assessed as having this potential barrier were working full-time, while 43.6 percent of those without the potential barrier were working full-time. Twelve months later, the prevalence of work was essentially equivalent for the two groups, those with and without the potential barrier. At Wave 3, about half of the individuals assessed as *having the narrow alcohol misuse barrier* worked 32 or more hours weekly. Essentially the same proportion of respondents *not having* the potential barrier also worked 32 or more hours per week. Also notable is what appears to be a “dose-response” relationship between severity of alcohol misuse and the probability of working at Wave 2. As alcohol use increases, the percentage of individuals with the alcohol use barrier who are working decreases. This relationship does not hold at Wave 3.

Other Drugs. While any and weekly *use of drugs* were significantly associated with work status at Wave 2, by Wave 3 the associations had vanished. A dose-response relationship does not appear to exist between the frequency of illegal drug use and the probability of working full-time.

Physical Health. The four potential physical health barriers were significantly associated with work status at Wave 2, and at Wave 3 three of the measures (*2+ health problems interfere*, *2+ functional limitations*, and *health fair to poor*) remained significant.

Mental Health. All measures were significantly associated with work at Wave 2. Three of seven potential mental health barriers maintained significant associations with not working at Wave 3 – *low vitality*, *depression*, and *somaticization*.

Domestic Abuse. Partner control, while demonstrating a significant effect at Wave 2, no longer did so at Wave 3. Two other measures of domestic abuse (*household violence* at Wave 2 and *other family violence* at Wave 3) were marginally significant.

**Table 4-1
Health-Related Barriers and Work Status**

	WAVE 2 (N=449)			WAVE 3 (N=430)		
	With Barrier	Without Barrier	p	With Barrier	Without Barrier	p
ALCOHOL						
Monthly binge drinking	31.5	43.3	*	43.9	47.0	NS
Semi-weekly binge drinking	27.9	43.3	*	50.0	46.5	NS
Weekly binge drinking	14.8	43.6	***	64.7	46.0	NS
Alcohol dependence	12.9	44.0	****	50.0	46.6	NS
Alcohol misuse – narrow	5.0	43.6	****	47.1	46.7	NS
Alcohol misuse – broad	30.8	43.8	**	45.7	46.9	NS
OTHER DRUGS						
Weekly drug use	27.7	43.5	**	43.9	47.0	NS
Frequent drug use	32.4	42.7	NS	46.7	46.8	NS
Daily drug use	26.9	42.8	NS	45.8	46.8	NS
Any drug use	31.6	44.0	**	43.8	47.4	NS
PHYSICAL HEALTH						
2+ health problems	35.6	48.2	***	43.9	49.1	NS
2+ health problems interfere	28.3	46.1	***	30.1	50.7	****
2+ functional limitations	28.0	45.8	***	28.2	51.3	****
Health fair to poor	30.5	46.5	**	35.3	51.0	***
MENTAL HEALTH						
Low vitality	20.3	45.1	****	30.0	48.9	**
Many mental health symptoms	26.3	45.3	***	40.5	47.9	NS
Mental health “case”	31.0	46.1	***	42.9	48.2	NS
Depression	27.7	43.5	**	32.6	48.3	**
Anxiety	19.6	44.7	****	36.8	48.3	NS
Somaticization	21.9	45.7	****	32.9	49.6	***
Obsessive-Compulsive	30.7	44.6	**	40.0	48.1	NS
DOMESTIC ABUSE						
Partner violence	29.2	42.6	NS	42.1	47.0	NS
Other family violence	20.0	42.4	NS	72.7	46.1	*
Household violence	27.3	43.0	*	50.0	46.5	NS
Partner control	20.7	43.3	**	42.3	47.0	NS

*p < 0.10 **p < 0.05 ***p < 0.01 ****p < 0.001

Table 4-2 displays the results of multivariate logistic regression models examining the relationship of potential barriers with full-time work at Waves 1, 2, and 3. Following our practice in Report 5, eighteen potential barriers and three additional sociodemographic characteristics were selected for inclusion in the model. Variables selected for inclusion represent potential barriers that have shown associations with working, either in this or previous reports or in the literature. We avoided selecting variables that overlapped with other variables already selected and that, while significant, affected a very small proportion of study respondents. Thus, for example, we did not select more than one measure of alcohol use, use of illegal drugs, or physical health, and we did not include the mental health measure of *low vitality*, which overlapped conceptually with *depression*, or *somaticization*, which was found to be highly and significantly correlated with *anxiety* and some of the physical health barriers.

Table 4-2 displays the results of the multivariate models in the form of odds ratios. For each variable in the model, the odds ratio expresses the probability of working 32 or more hours per week for respondents having that characteristic or barrier, compared to respondents in the reference category, who are individuals without that characteristic or barrier. Hence, results for respondents 45 or older are contrasted to those for 19-to-44 year-olds; results for males are compared with findings for females; and so on. The odds ratio for each variable is calculated while controlling for all other variables in the model. Since the reference category is always assigned an odds of 1.00, an odds ratio greater than one signifies that the characteristic or presumed barrier is associated with a greater likelihood of working. An odds ratio less than one means the variable is associated with a lower likelihood of working. Thus, we find, for example, that a respondent assessed at Wave 3 as having the *lacks family child care* barrier is only 27 percent as likely to be working 32 or more hours per week compared to someone without this potential barrier (see third row from bottom of Table 4-2). This is a statistically significant finding, i.e., the difference in the odds of working for respondents with and without the *lacks family child care* barrier is unlikely to be due to chance. On the other hand, the finding at Wave 3 that respondents with the *lacks evening child care* barrier are 66 percent as likely to be working as those without this barrier is not statistically significant. Similarly, while at Wave 3, individuals with limited English proficiency and those with few work skills were more likely to be working at or above the 32

hour a week rate compared to people without these presumed barriers, these observed differences are not statistically significant, i.e., they are likely due to chance.

We highlight the rows in which significant relationships are evident across the three interview waves. While sociodemographic and human capital variables failed to meet this criterion for focus, one family responsibility barrier (*lacks family child care*), the transportation barrier of *no car and/or no driver's license*, and one health-related barrier (*functional limitations* such as difficulty walking several blocks or lifting and carrying groceries) sustained significant relationships with work across the three interview waves. Across the interview waves, *functional limitations* were found to diminish the odds of working, so that by Wave 3 a respondent with two or more such limitations was only two-fifths as likely to work full-time, compared to a respondent without such limitations (odds ratio of 0.41). Over time, *lack of family child care* also increased its significant association with work. At Wave 3 a respondent without family child care was only one-quarter as likely to work full-time, compared to a respondent with family child care. *Lack of a car and/or a driver's license* retained its level of significance across the three waves. At each wave respondents with this transportation barrier were less than half as likely to be working as respondents without the barrier.

Variables that appear significant in the model at one or two, but not all three, data points include *anxiety*, *alcohol dependence*, *lacks evening child care*, *has toddler*, *pregnant or new baby*, *longer welfare history*, *White ethnicity*, and *Vietnamese ethnicity*. Of additional importance, the proportion of variance explained by the multivariate model at the three waves – the R^2 – remained low, varying from 0.20 at Wave 1 to 0.29 at Wave 2 and 0.23 at Wave 3. A fairly low R^2 is not unusual in complex socio-epidemiological models of this sort and suggests that unmeasured factors came into play in determining work status.

Table 4-2
Adjusted Models of Association of Demographic and Barrier Variables with Working
CalWORKS Required Number of Hours or More per Week, at Wave 1 thru Wave 3

Variable (reference category)	WAVE 1 (N=512; R ² =0.20)		WAVE 2 (N=449; R ² =0.29)		WAVE 3 (N=430; R ² =0.23)	
	Odds Ratio	P	Odds Ratio	p	Odds Ratio	p
Sociodemographics						
Age (19-44)						
45+	1.26	NS	0.58	NS	0.81	NS
Gender (female)						
Male	1.18	NS	0.82	NS	1.14	NS
Race/Ethnicity (African American)						
White	1.18	NS	1.00	NS	1.98	**
Hispanic	1.17	NS	0.94	NS	1.17	NS
Vietnamese	0.27	**	0.38	*	0.54	NS
Other	0.62	NS	0.73	NS	0.80	NS
Human Capital						
Limited education	0.70	NS	1.21	NS	0.75	NS
Limited English proficiency	1.52	NS	0.58	NS	1.55	NS
Few work skills	0.88	NS	0.71	NS	1.45	NS
CJ system involvement	0.58	NS	0.65	NS	0.94	NS
Welfare History						
Longer welfare history	0.77	NS	0.59	**	0.64	*
Health-Related						
Alcohol dependence	1.21	NS	0.27	**	2.44	NS
Daily drug use	1.31	NS	0.71	NS	0.96	NS
Functional limitations	0.51	**	0.58	*	0.41	****
Depression	1.26	NS	1.68	NS	0.71	NS
Anxiety	0.86	NS	0.35	**	1.15	NS
Partner violence	0.43	NS	1.28	NS	0.43	NS
Partner control	1.01	NS	0.40	NS	1.08	NS
Family Responsibility						
Pregnant or new baby	0.70	NS	0.52	*	0.98	NS
Has toddler	0.59	*	0.65	NS	0.54	**
Special needs child	1.12	NS	0.71	NS	1.15	NS
Lacks family child care	0.55	***	0.61	**	0.27	****
Lacks evening child care	0.18	****	0.19	****	0.66	NS
Transportation						
No car and/or no driver's license	0.46	****	0.37	****	0.47	****

* p < .10 ** p < .05 *** p < .01 **** p < .001

It should be noted that the associations evident in Table 4-2 do not constitute arguments for causation, or even directionality of the relationships. This caution holds more obvious relevance for some potential barriers than for others. For example, *lack of transportation* may be either a cause or an effect (or neither) of working. Lack of a car may make working difficult or impossible, but lack of work may make the purchase or upkeep of a car impossible. The same argument holds for *child care*. For some individuals, lack of flexible, available, family-provided child care coverage may make work impossible. At the same time, lack of a rewarding job may diminish the motivation to secure child care help from family members. The direction of the relationship seems most clear for *functional limitations*, a factor reasonably perceived as causally related to inability to find, secure, or hold a job.

Taken together, it appears that, by Wave 3, relationships between having potential barriers and working that had been operating at Wave 1 and Wave 2 were no longer salient for the respondent group. Social and personal forces that had been operational – e.g., *alcohol dependence, anxiety, lacks evening child care, pregnant or new baby, has toddler, and Vietnamese ethnicity* – no longer dominated personal and household decisions about working. Rather, behaviors and decisions by certain CalWORKs recipients may have been motivated by impending state and federal time limits on welfare receipt, time on welfare, and welfare-to-work activities. In particular, the approach of time limits may account for the lack of significance of many barriers at Wave 3. With time limits clearly on the horizon, respondents may have found that they could engage in work despite having what appeared to us to be serious barriers such as alcohol dependence. At the same time, knowing that the prevalence of full-time work hardly changed from Wave 2 to Wave 3, and having seen so many respondents pulling back from, or losing, full-time work in the time between Waves 2 and 3, one must recognize that volition to work did not prove sufficient to obtain and retain full-time work.

The multivariate model emphasizes the importance of the *family child care* and *functional limitations* barriers, which increased in significance across interview waves, and that of the transportation barrier, which retained its strong negative association with working. The picture that emerges is one of the strong importance of logistic support for work as welfare

reform time limits come clearly into view and of the apparently intransigent significance of functional limitations, compared to other health-related potential barriers.

Consistency in Full-Time Work Status from Wave 2 to Wave 3

To examine an additional dimension for the influence of potential health-related barriers to work, we looked in more detail at the group of respondents who worked full-time at Wave 2 but not at Wave 3 (N=56), compared to those who engaged in full-time work at both points in time (N=123).

As seen in Table 4-3, with four exceptions, the percentage of respondents with health-related barriers was not significantly different for respondents who were working 32 or more hours at Wave 2 but were no longer working that many hours at Wave 3 compared to respondents who maintained their full-time work status at both waves. The exceptions are *alcohol dependence*, *low vitality*, and *somaticization*, marginally significant at $p < 0.10$, and the physical health barrier *two or more functional limitations*, significant at $p < 0.01$. In each of these cases a greater proportion of the no-longer-working group than of the still-working group was found to have the health-related potential barrier.

Table 4-3
Percentage of Respondents with Potential Health-Related Barriers at Wave 3,
by Consistency in Full-Time Work Status from Wave 2 to Wave 3

	No longer FT work (n = 56)		Still FT work (n = 123)		P
	%	N	%	N	
Alcohol use					
Monthly binge drinking	10.7	6	5.7	7	NS
Semi-weekly binge drinking	5.4	3	4.9	6	NS
Weekly binge drinking	1.8	1	1.6	2	NS
Alcohol dependence	5.4	3	0.8	1	*
Alcohol misuse – broad	12.5	7	5.7	7	NS
Alcohol misuse – narrow	3.6	2	0.8	1	NS
Illegal drug use					
Weekly drug use	8.9	5	5.7	7	NS
Frequent drug use	7.1	4	4.9	6	NS
Daily drug use	5.4	3	3.3	4	NS
Physical health					
2+ health problems	42.9	24	38.2	47	NS
2+ health problems interfere	14.3	8	10.6	13	NS
2+ functional limitations	26.8	15	11.4	14	***
Health fair to poor	19.6	11	19.5	24	NS
Any physical health	55.4	31	52.8	65	NS
Mental health					
Low vitality	10.7	6	4.1	5	*
Many mental health symptoms	12.5	7	8.9	11	NS
Mental health “case”	26.8	15	20.3	25	NS
Depression	10.7	6	5.7	7	NS
Anxiety	8.9	5	8.1	10	NS
Somaticization	17.9	10	8.9	11	*
Obsessive-Compulsive	12.5	7	8.1	10	NS
Any mental health	32.1	18	22.8	28	NS
Domestic abuse					
Partner violence	5.4	3	2.4	3	NS
Other family violence	1.8	1	0.8	1	NS
Household violence	7.1	4	2.4	3	NS
Partner control	7.1	4	4.9	6	NS
Any domestic abuse	12.5	7	5.7	7	NS

* p < 0.10 *** p < 0.01

Association between Potential Barriers and Welfare

For the purposes of this study, it should be recalled, a respondent was “on welfare” if she or he, or their children, reported receiving cash benefits from the CalWORKs program within the 30 days prior to interview. Table 4-4 shows the percentage of respondents *with* versus *without* each potential barrier who were on welfare at Wave 2 and at Wave 3. There were five significant relationships between potential health-related barriers and welfare at Wave 2: one mental health and four physical health barriers. At Wave 3 only one marginally significant association was evident.

Alcohol. In neither wave were significant associations found for the potential alcohol barriers.

Other Drugs. With one exception, in neither wave were significant associations found for the potential other drug barriers. At Wave 3, those with the *any drug use* potential barrier were marginally *less* likely to be on welfare. This might suggest that drug users were more likely to have found it difficult to meet administrative requirements to receive benefits.

Physical Health. For all four potential barriers, at Wave 2 respondents found to have the potential barrier were significantly *more* likely to remain on welfare. At Wave 3, no significant association was found.

Mental Health. With one exception, in neither wave were significant associations found for the potential mental health barriers. At Wave 2 those categorized with the *somaticization* potential barrier were *more* likely to be on welfare.

Domestic Abuse. In neither wave were significant associations found for the potential domestic abuse barriers.

**Table 4-4
Health-Related Barriers and Welfare Status**

	WAVE 2 On Welfare			WAVE 3 On Welfare		
	With Barrier	Without Barrier	p	With Barrier	Without Barrier	P
ALCOHOL						
Monthly binge drinking	57.4	61.3	NS	51.2	46.5	NS
Semi-weekly binge drinking	60.5	60.8	NS	46.9	47.0	NS
Weekly binge drinking	59.3	60.9	NS	35.3	47.5	NS
Alcohol dependence	71.0	60.0	NS	50.0	46.8	NS
Alcohol misuse – narrow	70.0	60.4	NS	47.1	47.0	NS
Alcohol misuse – broad	60.0	60.9	NS	52.2	46.4	NS
OTHER DRUGS						
Weekly drug use	63.8	60.4	NS	46.3	47.0	NS
Frequent drug use	67.6	60.2	NS	43.3	47.3	NS
Daily drug use	73.1	60.0	NS	45.8	47.0	NS
Any drug use	61.8	60.6	NS	37.5	49.1	*
PHYSICAL HEALTH						
2+ health problems	66.2	55.4	**	46.5	47.4	NS
2+ health problems interfere	70.8	57.7	**	48.2	46.7	NS
2+ functional limitations	73.0	57.3	***	50.6	46.1	NS
Health fair to poor	67.9	57.9	**	49.1	46.2	NS
MENTAL HEALTH						
Low vitality	69.5	59.5	NS	42.0	47.6	NS
Many mental health symptoms	60.0	61.0	NS	51.4	46.2	NS
Mental health “case”	62.7	60.1	NS	48.7	46.3	NS
Depression	57.4	61.2	NS	46.5	47.0	NS
Anxiety	62.7	60.6	NS	56.1	45.6	NS
Somaticization	74.0	58.2	**	52.1	45.9	NS
Obsessive-Compulsive	63.6	60.1	NS	50.0	46.4	NS
DOMESTIC ABUSE						
Partner violence	75.0	60.0	NS	47.4	47.0	NS
Other family violence	40.0	61.3	NS	36.4	47.3	NS
Household violence	63.6	60.6	NS	46.2	47.0	NS
Partner control	62.1	60.7	NS	46.2	47.0	NS

*p < 0.10 **p < 0.05 ***p < 0.01 ****p < 0.001

Summary

- In bivariate analyses, statistically significant associations were found between a number of health-related barriers and working full-time at Wave 2 but not at Wave 3. These associations for the most part disappeared in multivariate analyses controlling for demographic, human capital, welfare history, family responsibility, and transportation variables. Among the health-related barriers studied, only the variable *two or more functional limitations* was found to be significantly associated with lack of full-time work across all three interview waves in multivariate analyses.
- Four of five Wave 2 health-related barriers significantly associated with welfare status were a physical health measure. No significant association remained at Wave 3.
- *Lack of a car and/or driver's license* and *lack of family child care* were found to be on a par with *two or more functional limitations* in terms of the strength of their association with work status in multivariate analyses at all three waves, reducing the probability of working by between 27 and 61 percent.
- Health-related barriers were *not* found to play a role in analyses examining the reasons for loss of full-time work among study participants whose work status changed from full-time at Wave 2 to part-time or no work at Wave 3, except for *two or more functional limitations*, the only health-related variable showing non-marginal statistically significant associations with consistency of full-time work status.
- While four potential physical health barriers showed significant associations with being on welfare at Wave 2, no health-related variables showed statistically significant associations with receipt of cash welfare assistance at *both* Wave 2 and Wave 3.

5. PREVALENCE OF POTENTIAL HEALTH-RELATED BARRIER COMBINATIONS OVER TIME AND ASSOCIATIONS WITH EMPLOYMENT AND WELFARE OUTCOMES

In Section 4 we found that *lack of transportation*, *lack of family child care*, and *two or more functional limitations* exhibited the strongest associations with lack of full-time work while controlling for demographic, human capital, welfare history, family responsibility, and other health-related barriers. Despite the statistical non-significance of most health-related potential barriers in these multivariate analyses, and knowing that retention of full-time employment appears so difficult for many respondents, we felt it appropriate to pursue one additional analytical approach – the influence of combinations of potential health-related barriers. In the pages immediately following, we examine the prevalence of barrier combinations over time and the association of barrier combinations with work and welfare outcomes at Wave 2 and Wave 3.

To avoid the limitations presented by small cell sizes for some potential barrier categories, a problem that would be multiplied with creation of combinations of these barriers, we use, in most cases, the broadest definition of any of the health related barriers in conducting this analysis. For alcohol, we use the *alcohol misuse – broad* category (drinks 5+ drinks at a time at least once a month in past year OR has 3 or more alcohol dependence symptoms). For drugs we use the *weekly drug use* category (used illegal drug 1+ times a week in past year). As measures of physical health, mental health, and domestic abuse, we calculated “any” variables; that is, experienced any of the listed physical health problems, any of the listed mental health problems, and any of the listed domestic abuse problems. All possible dual combinations of health-related barriers appear in these tables, using these broad definitions of the existence of a problem within each of the five domains (alcohol, drugs, physical health, mental health, domestic abuse). Table 5-1 displays the prevalence of respondents with these combinations of potential barriers across waves. Table 5-2 summarizes the relationship between barrier combinations and full-time work. Table 5-3 displays findings concerning the relationship between barrier combinations and welfare status.

The results are consistent with previous findings: (1) As with the prevalence of health-related barriers, the prevalence of health-related barrier *combinations* decreases over time (Table 5-1). By far most prevalent, at each measurement point, is the combination of physical and mental health potential barriers (39.6% at Wave 1, 33.1% at Wave 2, 26.9% at Wave 3). Next highest in prevalence are the other barrier combinations involving physical health, with Wave 1 prevalences of 10.9 to 13.9 percent decreasing to between 6.2 and 7.0 percent at Wave 3. Except for the prevalence of the mental health and domestic abuse combination at Wave 1 (10.7%), all of the other barrier combinations are experienced by fewer than 10 percent of the sample at each time point. (2) At Wave 2, for each barrier combination, adding barriers increases the risk of not working (Table 5-2). For example, considering respondents with drug and mental health potential barriers, at Wave 2 48.1 percent of those with neither barrier were working full-time, 33.5 percent of those with either one of the two barriers were working full-time, but only 25.0 percent of those with both barriers were working full-time. At Wave 3, however, there is no statistical association between barrier combinations and working. (3) In terms of the relationship between barrier combinations and welfare status, at Wave 2 a significant association appears for four of the ten combinations examined, all of which involve a physical health problem, but at Wave 3 no significant associations are evident (Table 5-3).

**Table 5-1
Prevalence of Potential Health-Related Barrier Combinations, Waves 1 to 3 (N=402)**

	Wave 1		W1-W2	Wave 2		W2-W3	Wave 3		W1-W3
	%	N	+/-	%	N	+/-	%	N	+/-
Alcohol+Drugs	3.7	15	0.0	3.7	15	-0.7	3.0	12	-0.7
Alcohol+Physical Health	11.2	45	0.2	10.7	43	-4.5	6.2	25	-2.5
Alcohol+Mental Health	6.7	27	1.8	8.5	34	-3.5	5.0	20	-1.7
Alcohol+Domestic Abuse	3.7	15	-0.2	3.5	14	0.0	3.5	14	-0.2
Drugs+Physical Health	10.9	44	-2.2	8.0	32	-1.3	6.7	27	-1.9
Drugs+Mental Health	8.0	32	-2.3	5.7	23	-1.5	4.2	17	-3.8
Drugs+Domestic Abuse	4.2	17	-0.7	3.5	14	0.0	3.5	14	-0.7
Phys Health+Mental Health	39.6	159	-5.3	33.1	133	-6.2	26.9	108	-8.8
Phys Health+Domestic Abuse	13.9	56	-3.5	10.0	40	-3.0	7.0	28	-4.7
Ment Health+Domestic Abuse	10.7	43	-2.2	8.5	34	-2.5	6.0	24	-4.7

Table 5-2
Percentage of Respondents Working 32 or More Hours Per Week
at Wave 2 and Wave 3, by Potential Health-Related Barrier Combinations

	Wave 2 (N=449)				Wave 3 (N=430)			
	% Working 32+ hours/week				% Working 32+ hours/week			
	Neither Present	One Present	Both Present	p	Neither Present	One Present	Both Present	p
Alcohol+Drugs	45.3	28.8	31.3	**	47.1	45.8	42.9	NS
Alcohol+Physical Health	47.0	42.1	23.9	**	50.0	43.8	51.9	NS
Alcohol+Mental Health	47.7	35.6	25.0	***	50.2	39.7	52.4	NS
Alcohol+Domestic Abuse	44.7	34.5	18.8	**	47.2	43.8	50.0	NS
Drugs+Physical Health	48.1	40.3	25.7	**	50.0	43.8	50.0	NS
Drugs+Mental Health	48.1	33.5	25.0	***	50.0	40.7	47.4	NS
Drugs+Domestic Abuse	44.1	36.4	12.5	**	47.1	45.8	42.9	NS
Phys Health+Mental Health	47.1	46.4	31.5	***	48.2	51.0	39.5	NS
Phys Health+Domestic Ab	47.2	41.0	27.3	*	48.5	45.9	43.3	NS
Mental Health+Domestic Abuse	46.6	37.6	21.6	***	49.6	41.2	46.2	NS

*p < 0.10 **p < 0.05 ***p < 0.01

**Table 5-3
Percentage of Respondents “On Welfare” at Wave 2 and Wave 3,
by Potential Health-Related Barrier Combinations**

	Wave 2 (N=449) % “on Welfare”				Wave 3 (N=430) % “on Welfare”			
	Neither Present	One Present	Both Present	p	Neither Present	One Present	Both Present	p
Alcohol+Drugs	60.3	63.8	56.3	NS	46.5	49.2	50.0	NS
Alcohol+Physical Health	51.7	66.1	60.9	**	44.6	48.1	51.9	NS
Alcohol+Mental Health	58.7	63.1	66.7	NS	46.0	48.6	47.6	NS
Alcohol+Domestic Abuse	61.3	57.1	68.8	NS	46.0	51.6	50.0	NS
Drugs+Physical Health	51.9	65.5	65.7	**	44.3	50.0	40.0	NS
Drugs+Mental Health	57.8	65.2	66.7	NS	46.2	49.7	36.8	NS
Drugs+Domestic Abuse	60.5	62.1	62.5	NS	46.8	47.5	50.0	NS
Phys Health+Mental Health	51.6	64.9	66.4	**	45.7	47.6	47.9	NS
Phys Hlth+Domestic Abuse	52.8	65.6	63.6	**	46.2	46.3	56.7	NS
Mental Health+Domestic Abuse	59.1	61.7	70.3	NS	45.9	50.0	42.3	NS

**p < 0.05

Summary

- The prevalence of health-related barrier combinations, as with the prevalence of health-related barriers, decreases over time.
- By virtue of the overall higher prevalence of physical health barriers, combinations of barriers involving physical health were also the most prevalent over time, with highest prevalence rates found for the combination of mental health and physical health problems.
- At Wave 2 only, adding barriers increases the risk of not working, while this is not true at Wave 3, where there is no statistical association between barrier combinations and working.
- At Wave 2, but not at Wave 3, there is a statistical association between barrier combinations involving physical health and welfare status.

6. NEED AND USE OF BEHAVIORAL HEALTH, PHYSICAL HEALTH, AND DOMESTIC ABUSE SERVICES, BASELINE TO WAVE 3

The findings above suggest that, with the exception of *two or more functional limitations*, *potential* health-related barriers do not, in fact, constitute *absolute* barriers to full-time employment and leaving welfare. Some health conditions, as defined in this study, may simply not interfere with employment, or certain types of employment. In the case of mental and physical health, employees may, when motivation to work is sufficient, “work over” their problems. Indeed, many people with disabilities do in fact work.⁴ In some instances, domestic abuse may promote a commitment to the workplace as a “route out of abusive intimate relationships” (Lloyd, 1997). There is also literature suggesting that workers are more productive in certain industries, or work situations, when utilizing alcohol or other drugs.⁵ Similarly, welfare status may be relatively unaffected by many health conditions.

This is not to say that health-related problems have *no* effect on the ability of welfare recipients to obtain and keep employment and leave the welfare rolls. The data with which we have to work in this study for the most part only indirectly address the relationship between health-related problems and work and welfare status. While employment and welfare status measures are in terms of the current and last 30-day time periods, all of the alcohol, other drug, and domestic abuse questions, and two of the four physical health questions, inquire about the past year. The other two questions about physical health – *two or more functional limitations* and *fair to poor health* – reference the current period. Six of the seven mental health questions focus on the past seven days; one, on the past 30 days. Hence a positive score on an alcohol, drug, domestic violence, or two of the physical health measures – even if such factors had a profound influence on work or welfare status at some time in the past year – could have relatively little influence on employment and welfare status in the *current* period, the focus of the analyses reported here. Similarly, with the short reference period for the mental health measures, an acute problem might have little to do with current status at work or on welfare. Problems could be short-lived because of a natural

⁴ In an analysis of United States labor force participation in 2001, it was found that of the 21.3 million persons aged 16 to 74 with a work disability, 22.3% were employed, more than half of them full-time (U.S. Census Bureau, 2002).

⁵ See, for example, the use of stimulants by military pilots (Eisman, 2003).

time cycle, or a respondent could have sought and received therapy or other assistance to resolve a problem. In short, as the findings in this study demonstrate, most *problems*, as we measured and defined them, did not constitute *barriers* to work and welfare departure.

In this section, we turn to the question of whether study participants assessed as having a potential health-related barrier acknowledged that they had a problem and subsequently sought and received help to overcome it. As alluded to above, some potential barriers may not have adversely affected work status precisely because the respondent recognized the problem in time and sought and received help before the ability to work was jeopardized. This may, in part, account for the lack of association between health-related problems experienced in the past year and work status as measured at the time of interview. It is also important to understand the degree to which welfare recipients who needed help were linked to services and helped by the services they received.

Expressions of need for services as well as their receipt may involve both objective and subjective factors. For example, perceived need for and receipt of services, and the steps between these two points, reflect objective personal health status, desire to address that status, availability of accessible services, and knowledge *about* availability of those services. The third and fourth of these factors may be variables that depend upon County and other policy decisions regarding the funding, locating, and marketing of services. In this report we do not address the question of which factors may be primary.

Table 6-1 shows the percentage of respondents with measured health-related problems who *reported* a need for related services. These results are also illustrated graphically in Figures 6-1 through 6-5, separately for each of the five health domains – alcohol, illegal drugs, physical health, mental health, and domestic abuse. Table 6-2, with accompanying Figures 6-6 through 6-10, shows the percentage of respondents who *received* needed services.

Alcohol. Across the three waves, for all six measures, no more than 37.5 percent of respondents with problems that we identified expressed a need for services (Table 6-1, Figure 6-1). The graph lines appear to track well severity of problem; the more severe the alcohol problem, the more likely the respondent recognized a need for help. For study participants assessed as having the narrow measure of alcohol misuse, characterized by alcohol

dependence and heavy drinking at least once a month, the self-reported need for help was the greatest, ranging from 26.3 to 37.5 percent. For respondents with alcohol dependence alone, the need for help ranged from 26.7 percent at Wave 2 to 33.3 percent at Wave 3. Perhaps the least severe measure of alcohol misuse, those who drank heavily at least once a month, were the least likely to express a need for help. Overall, after a dip at Wave 2, at Wave 3 the percentage of respondents with alcohol problems reporting a need for services closely mirrored reports at Wave 1. It should be noted, however, that the number of respondents reporting a need for services was very small. Hence, findings in the alcohol barrier domain are likely to be unstable.

Receipt of needed services among respondents with an alcohol problem who stated a need for help was quite high at Wave 1 (Table 6-2, Figure 6-6). Depending on the particular potential alcohol barrier, between 80.0 and 85.7 percent of respondents reporting a need for services also indicated they received needed services. At Waves 2 and 3, receipt of reported needed services declined to the 60 to 70 percent range.

Other drugs. The three measures of other drug use were tightly clustered at around one-quarter of the respondents identified as having problems reporting need for services at Wave 1, irrespective of problem measure (Table 6-1, Figure 6-2).⁶ Interestingly, between Wave 1 and Wave 3, respondents' reports of treatment need dropped by at least 50 percent for two of the measures and by over one-third for the final measure. It should be noted, however, that the number of respondents reporting a need for services was very small. Hence, findings in the drug barrier domain are likely to be unstable.

Receipt of needed services among those seen as having a drug problem was quite high at Wave 1, ranging from 90.0 to 100.0 percent and dropping slightly at Wave 2 (Table 6-2, Figure 6-7). As the number of respondents assessed as having a drug problem declined over time, for all three measures 100.0 percent of respondents reported having received needed services at Wave 3.

Physical health. Among the potential health-related domains, reported need for service was most prevalent among those with physical health problems (Table 6-1, Figure 6-3). Overall, at Wave 1, reports of need for physical health services were recorded for 42.3 to 58.5 percent

⁶ The broadest measure of other drug use – *any drug use in the past year* – was omitted from the analysis.

of respondents defined as experiencing a potential physical health barrier. Those reports dropped between Waves 1 and 2. For two physical health barriers – respondents with *functional limitations* and *problems interfering* – reports of need for treatment rose noticeably at Wave 3. Reports for service need among those with *health fair to poor* continued to decline, and for those with *two or more health problems* leveled off by Wave 3.

Receipt of needed services among those with a physical health problem was quite high at Wave 1, clustered from 86.4 to 90.3 percent (Table 6-2, Figure 6-8). The percent of respondents reporting having received needed services dropped slightly at Wave 2 and more precipitously at Wave 3, by which time the proportion of respondents having received needed services ranged from 60.6 to 70.6 percent.

Mental health. At Wave 1, between about 30 and 50 percent of respondents assessed as having mental health problems indicated a need for services (Table 6-1, Figure 6-4). For most measures the percentages reporting service need changed relatively little across the three interview waves.

Receipt of needed services among those with a mental health problem ranged from 37.5 to 52.2 percent at Wave 1 (Table 6-2, Figure 6-9). For all measures, the percent of respondents reporting having received needed services increased substantially at Wave 2, by 50 to 100 percent. Modest declines were evident at Wave 3, by which time the percentage of respondents having received needed services ranged from 54.5 to 65.5 percent.

Domestic abuse. As depicted in Table 6-1 and Figure 6-5, among respondents with histories of domestic abuse, reported need for services was low at Wave 1 (10.3 to 17.4%), spiked at Wave 2 (21.4 to 54.5%), and declined at Wave 3 to a middle level (16.7 to 33.3%). It should be noted, however, that the number of respondents reporting a need for services was very small. Hence, findings in the domestic abuse barrier domain are likely to be unstable.

Receipt of needed services among those seen as having a domestic abuse problem ranged from 50.0 to 100.0 percent at Wave 1 (Table 6-2, Figure 6-10). At Wave 2 all respondents with a domestic abuse problem reported receipt of needed services, and at Wave 3 percentages dispersed again, ranging from 25.0 to 100.0 percent. Again, the small numbers involved suggest that finding may be unstable.

Table 6-1
Percentage of Respondents with Potential Health-Related Barriers Reporting a Need
for Related Services, Wave 1 to Wave 3 (N=402)

	Wave 1		W1-W2	Wave 2		W2-W3	Wave 3		W1-W3
	%	N	+/-	%	N	+/-	%	N	+/-
Alcohol use									
Monthly binge drinking	13.6	6	-3.8	9.8	5	8.1	17.9	7	4.3
Semi-weekly binge drinking	19.4	6	-12.3	7.1	3	16.2	23.3	7	3.9
Weekly binge drinking	20.0	5	-8.5	11.5	3	23.8	35.3	6	15.3
Alcohol dependence	31.8	7	-5.1	26.7	8	6.6	33.3	7	1.5
Alcohol misuse – narrow	37.5	6	-11.2	26.3	5	11.2	37.5	6	0.0
Alcohol misuse – broad	14.0	7	-1.1	12.9	8	5.3	18.2	8	4.2
Illegal drug use									
Weekly drug use	26.0	13	-9.7	16.3	7	-8.4	7.9	3	-18.1
Frequent drug use	31.3	10	-16.6	14.7	5	-3.6	11.1	3	-20.2
Daily drug use	25.0	7	-13.0	12.0	3	-2.9	9.1	2	-15.9
Physical health									
2+ health problems	42.3	93	-12.1	30.2	62	1.5	31.7	57	-10.6
2+ health problems interfere	58.5	55	-16.8	41.7	40	4.4	46.1	35	-12.4
2+ functional limitations	48.4	44	-17.5	30.9	29	15.0	45.9	34	-2.5
Health fair to poor	51.2	65	-15.9	35.3	41	-4.2	31.1	33	-20.1
Mental health									
Low vitality	34.8	23	-5.0	29.8	17	12.4	42.2	19	7.4
Many mental health symptoms	41.9	31	-9.0	32.9	25	3.3	36.2	25	-5.7
Mental health “case”	29.8	42	-4.4	25.4	30	0.5	25.9	29	-3.9
Depression	39.3	22	2.0	41.3	19	-4.5	36.8	14	-2.5
Anxiety	47.9	23	-2.8	45.1	23	-9.8	35.3	18	-12.6
Somaticization	39.3	24	-10.9	28.4	19	4.9	33.3	22	-6.0
Obsessive-compulsive	41.0	34	-7.7	33.3	28	4.6	37.9	25	-3.1
Domestic abuse									
Partner violence	17.4	4	37.1	54.5	12	-21.2	33.3	6	15.9
Other family violence	13.3	2	11.7	25.0	2	-6.8	18.2	2	4.9
Household violence	14.7	5	30.1	44.8	13	-12.8	32.0	8	17.3
Partner control	10.3	4	11.1	21.4	6	-4.7	16.7	4	6.4

Figure 6-1
Percentage of Respondents with an Alcohol Use Problem
Reporting a Need for Services, Wave 1 to Wave 3

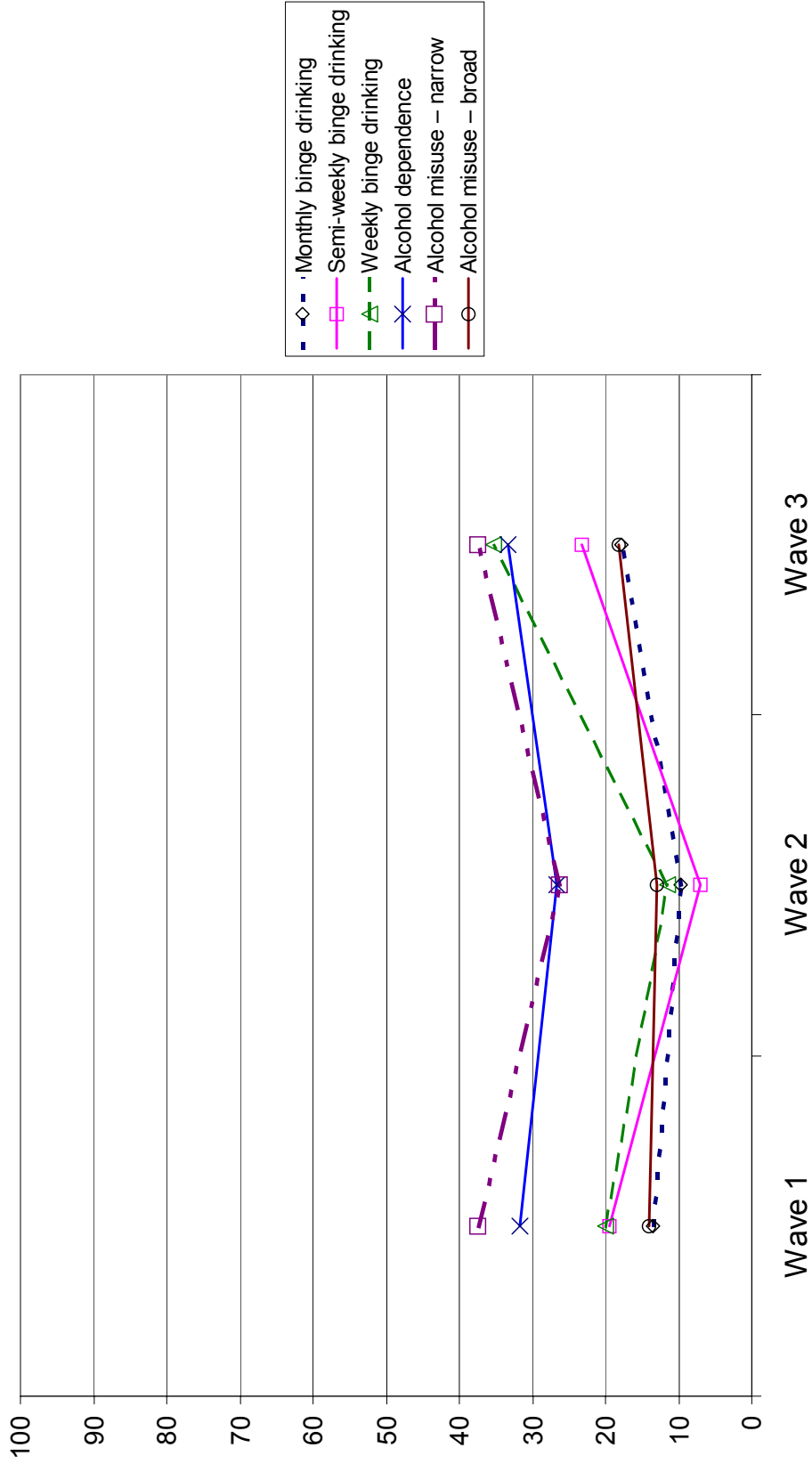


Figure 6-2
Percentage of Respondents with a Drug Use Problem
Reporting a Need for Services, Wave 1 to Wave 3

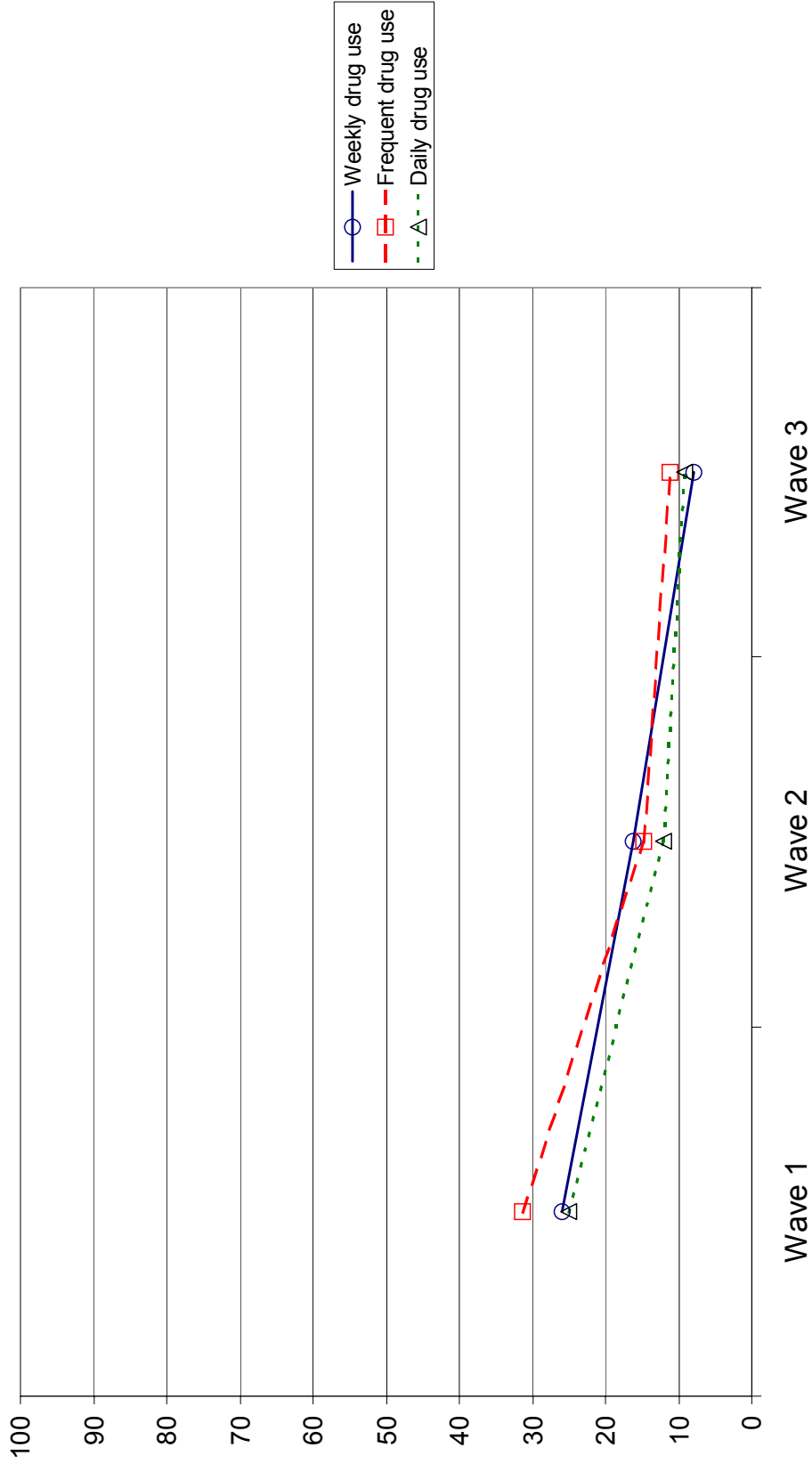


Figure 6-3
Percentage of Respondents with a Physical Health Problem
Reporting a Need for Services, Wave 1 to Wave 3

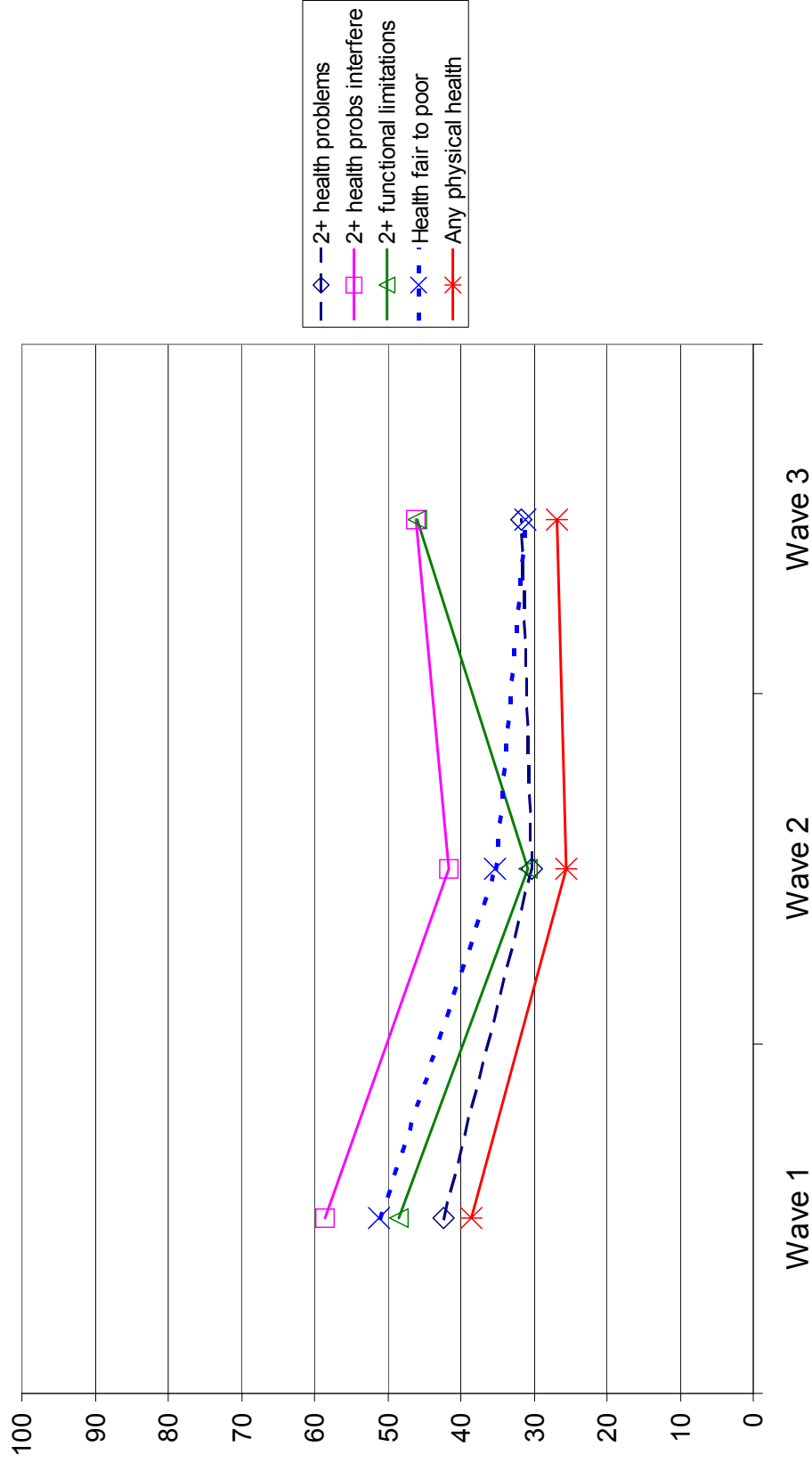


Figure 6-4
Percentage of Respondents with a Mental Health Problem
Reporting a Need for Services, Wave 1 to Wave 3

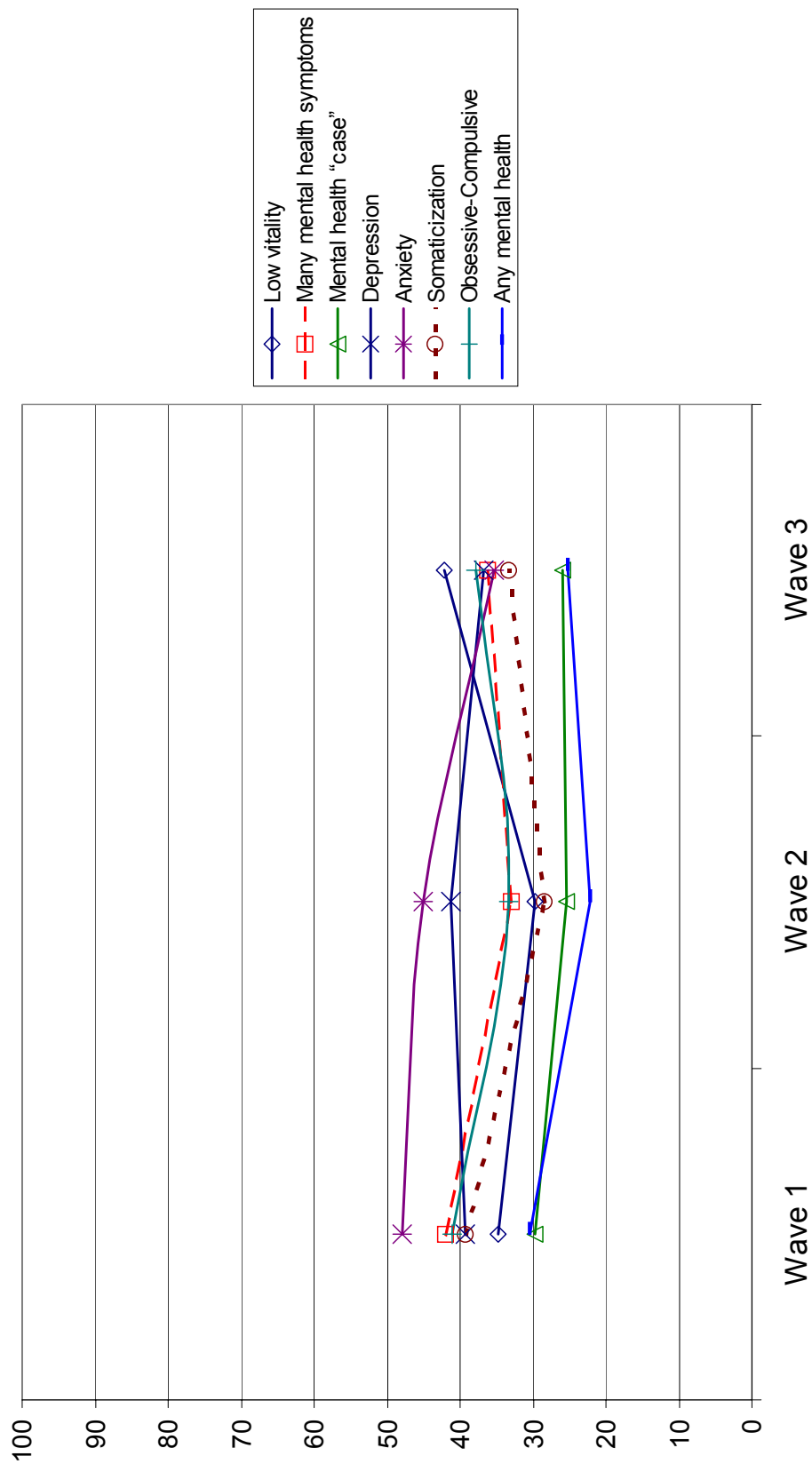


Figure 6-5
Percentage of Respondents with a Domestic Abuse Problem Reporting a Need for Services,
Wave 1 to Wave 3

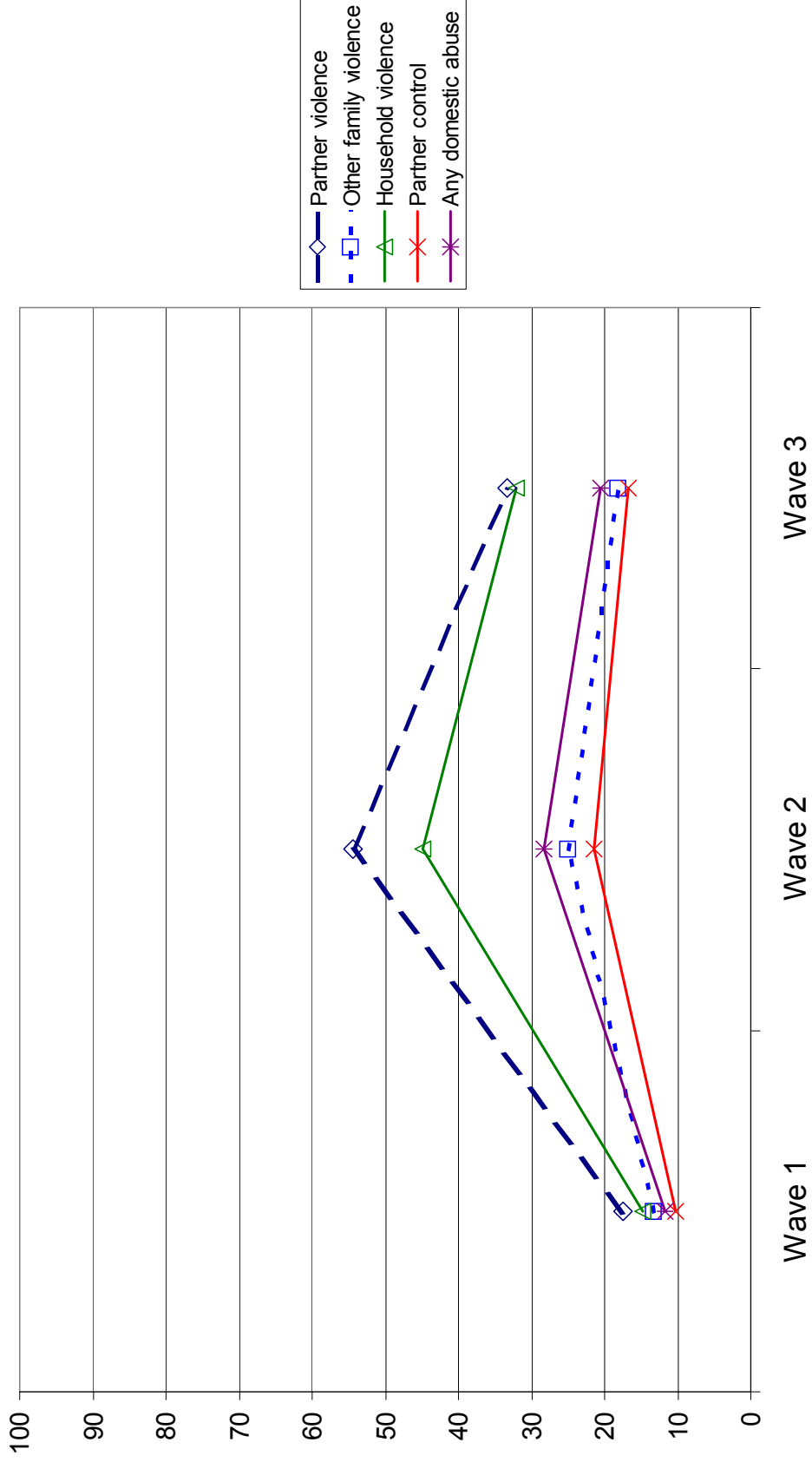


Table 6-2
Percentage of Respondents with Potential Health-Related Barriers Reporting that
Needed Related Services Were Received, Wave 1 to Wave 3 (N=402)

	Wave 1		W1-W2	Wave 2		W2-W3	Wave 3		W1-W3
	%	N	+/-	%	N	+/-	%	N	+/-
Alcohol use									
Monthly binge drinking	83.3	5	-23.3	60.0	3	11.4	71.4	5	-11.9
Semi-weekly binge drinking	83.3	5	-16.6	66.7	2	4.7	71.4	5	-11.9
Weekly binge drinking	80.0	4	-13.3	66.7	2	0.0	66.7	4	-13.3
Alcohol dependence	85.7	6	-23.2	62.5	5	-5.4	57.1	4	-28.6
Alcohol misuse – narrow	83.3	5	-23.3	60.0	3	6.7	66.7	4	-16.6
Alcohol misuse – broad	85.7	6	-23.2	62.5	5	0.0	62.5	5	-23.2
Illegal drug use									
Weekly drug use	92.3	12	-20.9	71.4	5	28.6	100.0	3	7.7
Frequent drug use	90.0	9	-10.0	80.0	4	20.0	100.0	3	10.0
Daily drug use	100.0	7	0.0	100.0	3	0.0	100.0	2	0.0
Physical health									
2+ health problems	90.3	84	-8.0	82.3	51	-15.6	66.7	38	-23.6
2+ health problems interfere	89.1	49	-4.1	85.0	34	-22.1	62.9	22	-26.2
2+ functional limitations	86.4	38	3.3	89.7	26	-19.1	70.6	24	-15.8
Health fair to poor	87.7	57	-7.2	80.5	33	-19.9	60.6	20	-27.1
Mental health									
Low vitality	52.2	12	18.4	70.6	12	-12.7	57.9	11	5.7
Many mental health symptoms	45.2	14	22.8	68.0	17	-8.0	60.0	15	14.8
Mental health “case”	47.6	20	22.4	70.0	21	-4.5	65.5	19	17.9
Depression	36.4	8	37.3	73.7	14	-16.6	57.1	8	20.7
Anxiety	43.5	10	21.7	65.2	15	-9.6	55.6	10	12.1
Somaticization	37.5	9	36.2	73.7	14	-19.2	54.5	12	17.0
Obsessive-compulsive	47.1	16	27.9	75.0	21	-11.0	64.0	16	16.9
Domestic abuse									
Partner violence	50.0	2	50.0	100.0	12	-50.0	50.0	3	0.0
Other family violence	100.0	2	0.0	100.0	2	0.0	100.0	2	0.0
Household violence	60.0	3	40.0	100.0	13	-37.5	62.5	5	2.5
Partner control	75.0	3	25.0	100.0	6	-75.0	25.0	1	-50.0

Figure 6-6
Percentage of Respondents with Alcohol Use Problems Reporting Having Received Needed Services, Wave 1 to Wave 3

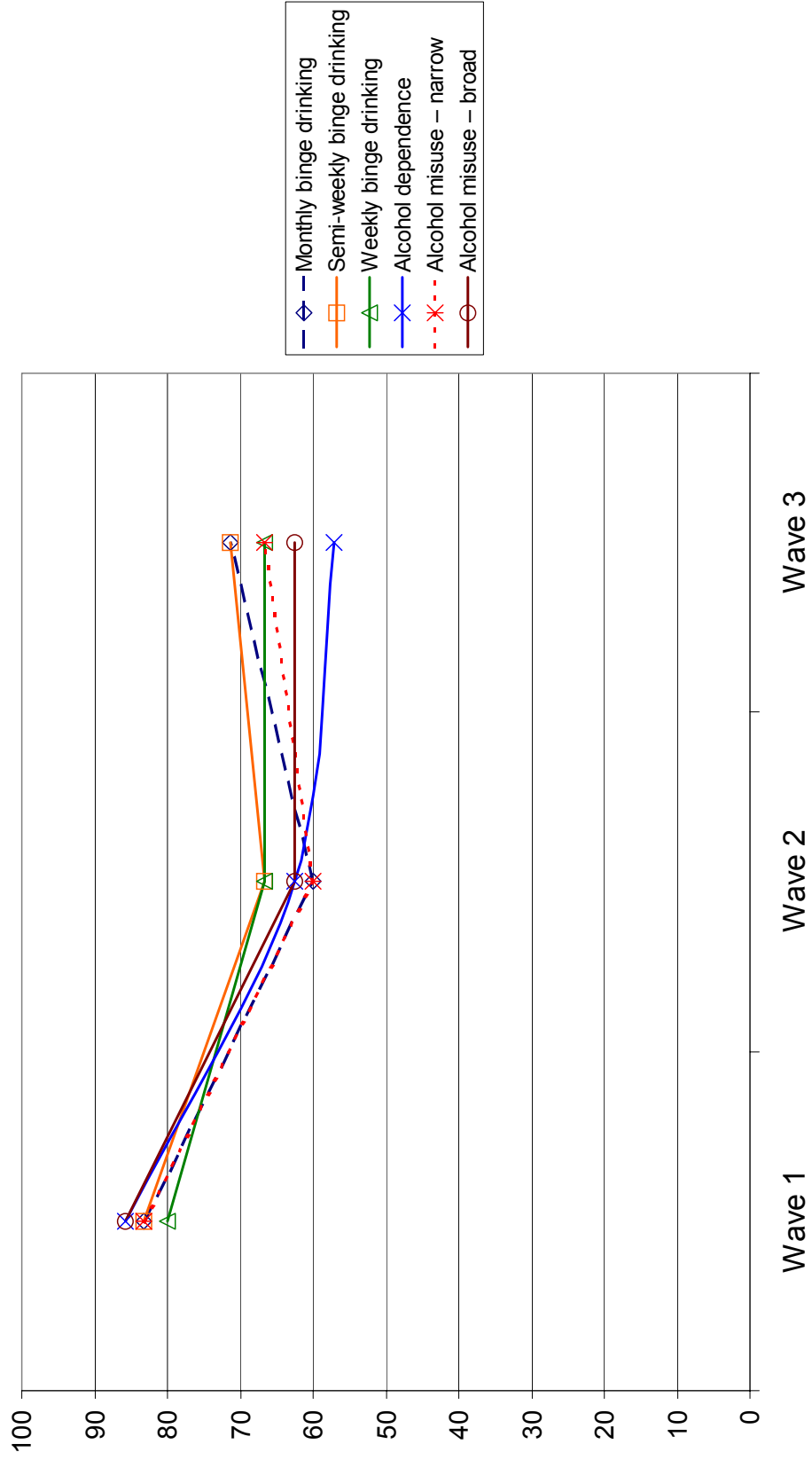


Figure 6-7
Percentage of Respondents with a Drug Use Problem Reporting Having Received Needed Services, Wave 1 to Wave 3



Figure 6-8
Percentage of Respondents with a Physical Health Problem
Reporting Having Received Needed Services, Wave 1 to Wave 3

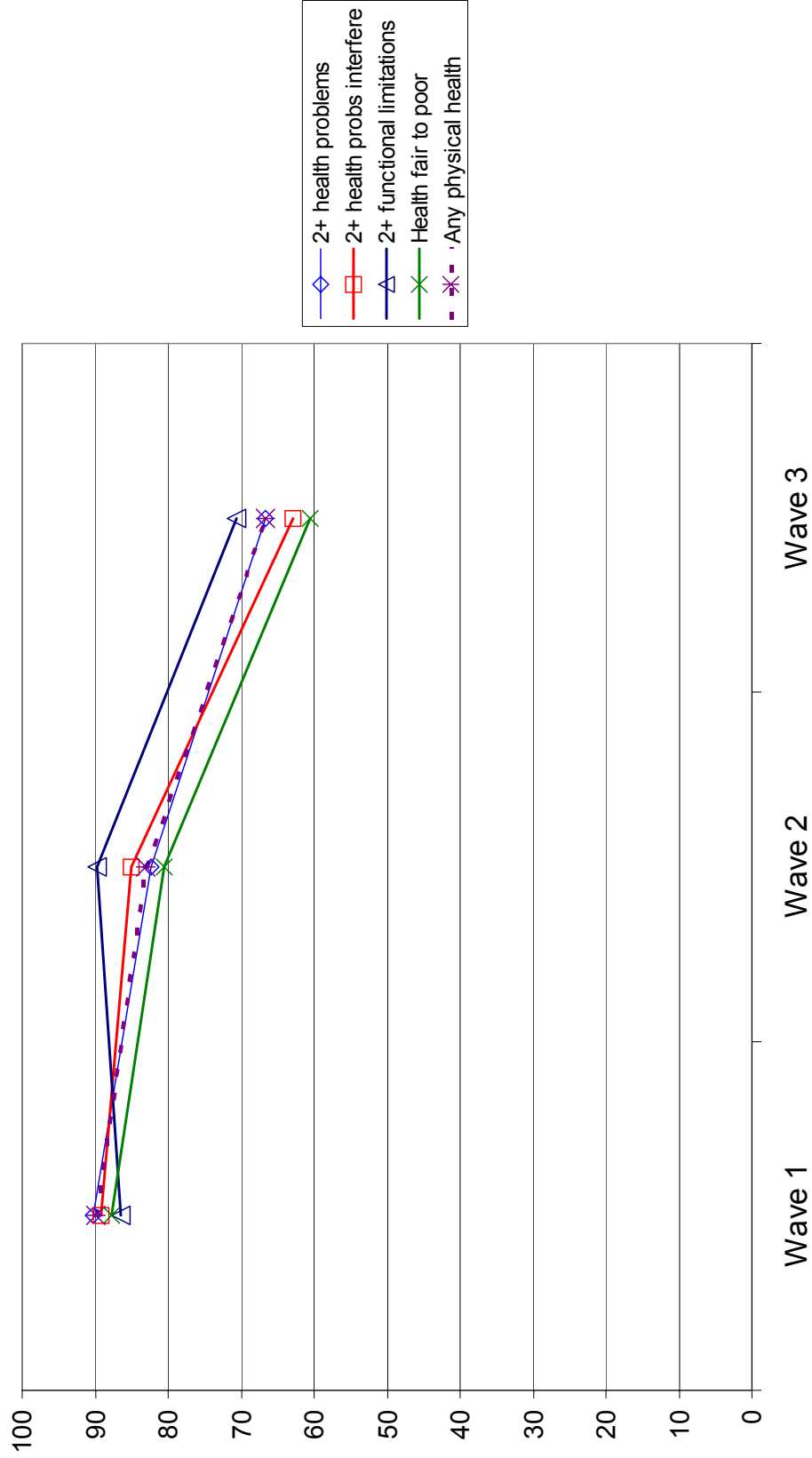


Figure 6-9
Percentage of Respondents with a Mental Health Problem
Reporting Having Received Needed Services, Wave 1 to Wave 3

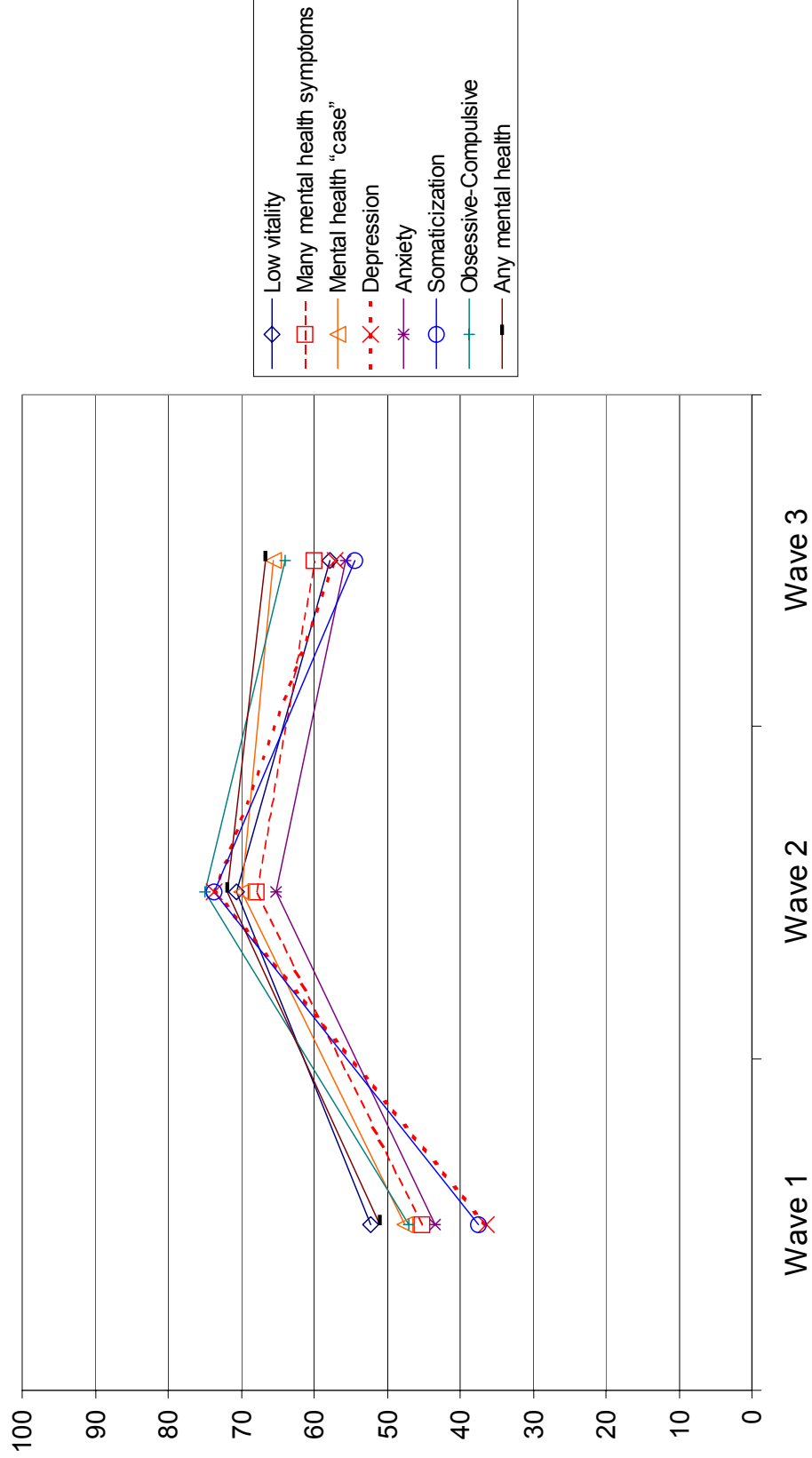
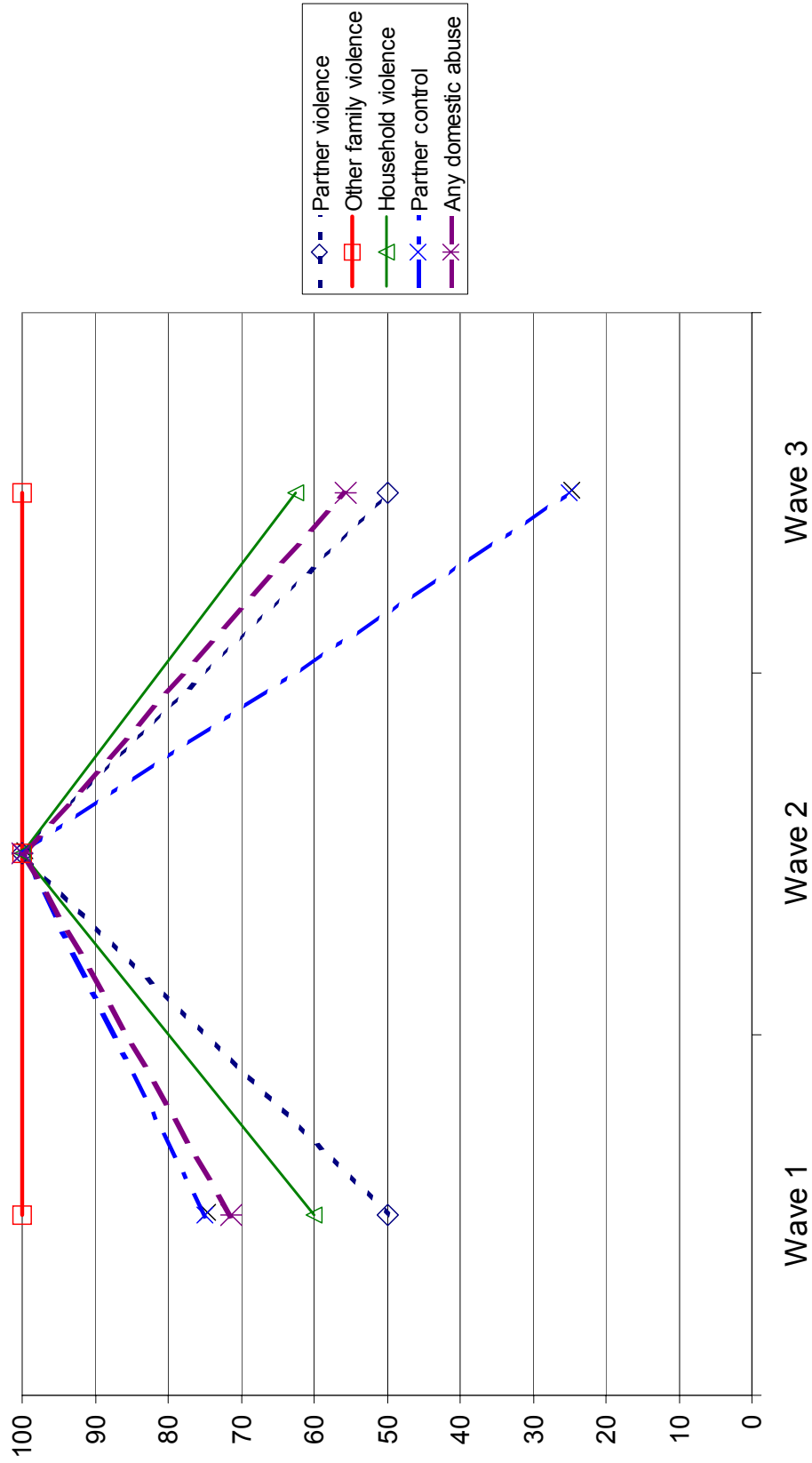


Figure 6-10
Percentage of Respondents with a Domestic Abuse Problem Reporting Having Received Needed Services, Wave 1 to Wave 3



Summary

- The perception of a need for help varies as a function of the type of barrier. Individuals with potential illegal drug use barriers are least likely to report a need for help. Individuals with physical health problems are the most likely to report a need for help.
- On average, increasing severity of problem drinking is associated with increasing percentages of individuals reporting a need for help. This “dose-response” pattern is not observed in the case of illegal drug use.
- For the most part, reported need for services decreased from Wave 1 to Wave 2 and went back up between Wave 2 and Wave 3, but not necessarily to the Wave 1 level. Exceptions to this pattern were people with potential drug use and domestic abuse barriers. Perceived need for help with drug use declined over the three waves, while the need for domestic abuse services peaked at Wave 2 and declined at Wave 3.
- The degree to which people who recognized a need for help actually received help varied as a function of the type of potential barrier. Individuals with an illegal drug use barrier who reported a need for drug services were the most likely to receive help. Study participants with a physical health problem were more likely to receive help than study participants with a mental health problem.
- Over the course of the study, access to services for those with a self-acknowledged need for help was lower at Wave 3 compared to Wave 1 for those assessed with a potential alcohol problem, a physical health problem, or a domestic abuse problem. Assistance with illegal drug use and mental health issues increased from Wave 1 to Wave 3.

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7. CONCLUSION

Survey data from a three-wave, longitudinal study of individuals receiving CalWORKs cash assistance benefits in Alameda County in October 1998 suggest that when first interviewed study participants experienced many physical health and mental health problems. Modest numbers reported episodes of domestic abuse and engaged in potentially problematic use of alcohol and other drugs. Over the course of the next 27 months most prevalence rates declined, but, nevertheless, by the third interview one in ten respondents met our broadest definition of a potential alcohol barrier to successful departure from welfare. One in ten respondents reported domestic abuse, and one in five reported use of illegal drugs. One in three had a potential mental health barrier, and we assessed over one in two as having a potential physical health barrier.

Within all domains of health-related barriers – alcohol, other drugs, physical health, mental health, and domestic abuse – significant bivariate associations were found between particular health-related conditions and working full-time at Wave 2, such that individuals with a particular barrier were less likely to be working full-time than individuals without the barrier. At Wave 3, significant associations with full-time work status were found only for physical health, a few mental health, and one domestic abuse barrier.

When the effect of health-related barriers on working full-time is assessed while controlling for demographic, human capital, welfare history, family responsibility, and transportation variables in multivariate analyses, only a single health-related barrier – *two or more functional limitations* such as difficulty walking several blocks or lifting and carrying groceries – was found significantly to predict lack of full-time work at all three interview waves.

While at Wave 2 one mental health and four physical health potential barriers predicted receipt of CalWORKs cash assistance, at Wave 3 only one marginally significant association was evident.

These findings suggest that, with the exception of *functional limitations*, potential health-related barriers do not, in fact, constitute *absolute* barriers to full-time employment and

leaving welfare, especially in the face of time limits when the motivation to work may be increasing. In Alameda County a number of resources mediated the threat of welfare time limits and the motivation to secure employment. For example, programs were developed to promote access to mental health and alcohol and drug treatment services as well as to programs serving individuals experiencing domestic abuse.

The degree to which people who recognized a need for help actually received help varied as a function of the type of potential barrier. Individuals with an illegal drug use barrier, if they reported a need for drug service, were the most likely to receive help. Study participants with a physical health problem were more likely to receive help than study participants with a mental health problem.

Over the course of the study, access to services for those with a self-acknowledged need for help was lower at Wave 3 compared to Wave 1 for those assessed with a potential alcohol problem or a physical health problem. Assistance with illegal drug use and mental health issues increased from Wave 1 to Wave 3.

Even for those who do not gain access to services, for some individuals the motivation to work may prove to be stronger than the disabling effect of some potential health-related barriers to work, especially in the face of impending federal and state time limits. However, for those who re-enter the work force on a full-time basis, one must wonder how long unresolved barriers will remain under workers' control and how workers' limitations will play out in terms of their continued employment and effects on their families.

These findings were not anticipated by the major sponsor of this report. It was expected that behavioral health problems would compromise job access and retention and promote extended stays on welfare. While we stand by our findings at variance to these expectations, the results may have been affected by any number of factors, known or unknown.⁷

⁷ While the scope of this project does not permit a systematic comparison of our findings with those from similar studies, it is worth noting that differences exist (see, for example, California Institute for Mental

All studies of this type suffer from limitations of resources, limitations of respondents' openness, and, ultimately limitations of the researchers' analytical perspectives and methods. The fact that we did not *find* evidence of bias in our original study recruitment method does not mean there was none (see Speiglman, Fujiwara, Norris, & Green, 1999). Furthermore, findings may have been compromised because of unknown researcher biases or because of compromises built into the survey instrument and study design.

For the most part the data with which we have to work only indirectly address the relationship between health-related problems and work and welfare status. For example, while we asked about employment and welfare status in terms of the current and last 30-day time periods, all of the alcohol, other drug, and domestic abuse questions, and two of the four physical health questions, inquired about the past year. The other two questions about physical health – *two or more functional limitations* and *fair to poor health* – referenced the current period. Six of the seven mental health questions focused on the past seven days; one, on the past 30 days. Hence a positive score on an alcohol, drug, domestic violence, or two of the physical health measures – *even if having had a profound influence on work or welfare status at some time in the past year* – might have had relatively little influence on employment and welfare status in the *current* period, the focus of analyses reported here. Similarly, with the short reference period for the mental health measures, an acute problem might have had little to do with current status at work or on welfare. Problems could be short-lived because of a natural time cycle, or a respondent could have sought and received therapy or other assistance to resolve a problem. In short, as the findings in this study demonstrate, most *problems*, as we measured and defined them, did not constitute *barriers* to work and welfare departure.

On a higher analytical level, as a colleague at the Department of Behavioral Health Care Services has pointed out, there may be more important outcomes to consider than employment and welfare status. It might, for example, have been of greater importance to examine mental health as an *outcome* rather than as a *predictor* variable. Better than

Health, 2000; Chandler & Meisel, 2002; and Danziger et al., 1999). A cross-study comparison of findings would involve substantial work to disentangle effects of sample construction and recruitment; respondent demographics, length of time on welfare, and other characteristics; measurement tools; and time periods studied.

our unsupported presumption that positive mental health status would predict engagement and retention in full-time work, for example, it might be more useful to examine whether full-time employment predicts positive mental health status and other forms of healing.

Clearly, there is room for further analysis of the data. In addition to the intriguing suggestion just mentioned, we are hopeful that continued analytical work can also be done using welfare and employment administrative data to which we were granted access by our research subjects. The administrative data can serve both to bolster predictor variables – paid work history and length of time on welfare, for example – as well as longer-term employment outcomes.

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