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Assessing Barriers to Employment Among CalWORKs Recipients in San Joaquin County - Final Report

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# DETAILED RESEARCH FINDINGS

## Assessing Barriers to Work Among CalWORKs Participants in San Joaquin County: Final Report

*Jean Norris and Richard Speigman*

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Welfare Policy Research Project



**CALIFORNIA POLICY RESEARCH CENTER**  
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## **EXECUTIVE SUMMARY**

California counties implemented the CalWORKs program in January 1998. In 2000, the Welfare Policy Research Project (WPRP) funded the Public Health Institute to examine “barriers to employment” and access to services among CalWORKs recipients in San Joaquin County. In this report, we describe the extent to which potential barriers (or “employment liabilities”) affected recipients’ ability to work part- or full-time.

## **BACKGROUND**

Congress made significant changes to federal welfare policies in 1996, imposing a 60-month lifetime limit on federal cash aid and increasing work requirements. In 1997, to comply with the new federal program, Temporary Assistance for Needy Families (TANF), California enacted and in January 1998 implemented the California Work Opportunity and Responsibility to Kids program (CalWORKs).

California also imposes a 60-month lifetime limit on adults’ receipt of cash aid, but continues to aid eligible dependent children after their parents “time out.” And, like the “work-first” program that preceded it (Greater Avenues for Independence), CalWORKs requires most able-bodied adults to work, seek work, or train for work: 32 hours per week on average for single parents, and 35 hours for two-parent households.

Those who are not exempt from these work requirements and who fail to comply with program rules without good cause are subject to fiscal penalties or “sanctions” in the form of grant reductions: The noncompliant adult is excluded from the calculation of the family’s cash grant. (See publications from WPRP’s four-county study of CalWORKs sanctions at <http://wprp.ucop.edu/>.)

CalWORKs also encourages work by increasing the percentage of the cash grant that a family retains when an adult earns income.

Given the new work requirements and time limits on cash aid, California policymakers asked whether nonexempt CalWORKs recipients experience particular problems that affect their ability to move from welfare to work.

## **SURVEYS ON BARRIERS TO WORK**

To answer policymakers’ questions, we interviewed San Joaquin County CalWORKs recipients at length. Recipients were surveyed in two waves (the spring and summer of 2000 and again in 2001) and the interviews were conducted in English, Spanish, Cambodian, and Vietnamese. Respondents were receiving CalWORKs cash assistance on behalf of themselves and their children in early 2000, and had to meet the program’s work requirements or run the risk of being sanctioned.

We asked about the following potential barriers to employment: poor health (physical and mental health, family violence, and substance abuse); family responsibilities (inadequate child care or



caring for a special-needs child); lack of transportation (no car, no driver's license); and/or "human capital" deficits (failure to graduate from high school, poor English-language skills, few work skills, or recent involvement in the criminal justice system).

We limited our subsequent analyses to 398 adults in single-parent households (196 of whom we interviewed once, and 202 twice), 90% of them mothers, and we matched their survey responses to state administrative data on work and welfare use from 1994 through 2001.

## **FINDINGS**

### **The Prevalence and Persistence of Barriers**

Other studies show that poor, single parents face numerous barriers to employment. We found the same thing. In 2000, only 8% of the adults we interviewed reported having none of the barriers we studied, 16% reported just one barrier, 20% reported two, and 57% reported three or more.

More than half reported at least one barrier related to human capital (63%), health (59%), or transportation (51%). About a third (34%) reported at least one barrier related to family responsibility, such as insufficient child care (25%) and/or having a child with health or other problems who required a lot of care (16%).

With respect to human capital, 50% of the recipients we interviewed lacked a high school diploma or its equivalent; 33% reported few work skills; 16% reported that their limited ability to speak, read, or write English hampered their efforts to work; and 14% reported a recent arrest, prison or jail time, parole or probation status.

With respect to health problems, 24% of the sample reported recent alcohol or drug abuse. Nineteen percent experienced two or more physical health problems, and 18% reported severe mental health symptoms in the seven days prior to the survey. Thirteen percent reported that physical violence or a partner's controlling behavior interfered with getting or keeping a job in the 12 months before the interview.

Although it was quite common for these single parents to experience at least one barrier when they were first surveyed, by 2001 the prevalence of barriers declined in every area we measured. In a few cases, the decline was striking. For example, reports of needing more child care dropped by two-thirds, from 25% to 8%. In addition, those reporting a large number of barriers (five or more) fell by nearly half, from 26% to 13%.

However, the prevalence of several individual barriers declined very little: alcohol or drug abuse (-0.7%), limited ability to read or write in English (-0.9%), and a child requiring a lot of care (-1.0%). Reports of other barriers declined by modest amounts.

Some barriers—particularly physical health problems, lack of child care, and family violence—also tended to be reported by different respondents at each wave of the survey. For example, while only 2% reported needing more child care in both interviews, 29% of the sample reported unmet childcare needs in one or the other interview. Although some of these barriers may have

been transient, it seems likely that others—such as mental health symptoms and physical health problems—were episodic.

Four barriers were notably stable, reported at the second interview by between 68% and 95% of those who reported it at the first: limited education (reported by 50% in wave 1, 47% in wave 2, and by 47% in both waves), lack of a car and/or driver’s license (51% in wave 1, 46% in wave 2, and 41% in both waves), few work skills (33% in wave 1, 27% in wave 2, and 22% in both waves), and limited English (13% in wave 1, 12% in wave 2, and 11% in both waves).

### ***Employment and Receipt of Cash Assistance***

The percentage of survey respondents that received CalWORKs declined and the percentage working increased between early 2000, when we drew the sample, and the end of 2001. The fraction of single-parent respondents who were receiving cash assistance and not working declined from 44% to 24%. The proportion of those combining work and cash aid declined from 32% to 20%, while the proportion working and *not* receiving cash aid increased from 9% to 25%. The proportion of those in the remaining category—neither working nor receiving cash aid—doubled from 15% to 31%.

Thus, among our sample, many more were working in 2001 than in 2000—and in particular working without a CalWORKs cash grant—but more respondents were also apparently unemployed and unaided.

In addition, the single parents we surveyed reported that their mean monthly household income increased from \$1,780 in 2000 to \$2,441 in 2001, with the growth attributable to increased earnings. As a result, the percentage falling below the federal poverty line fell from 54% to 38%. Income reported from public assistance (including, but not limited to, cash assistance) remained flat across the two waves of the survey.

Respondents’ work effort and the prevalence and persistence of barriers do not in themselves tell us whether and to what extent barriers may have affected their ability to work the number of hours required by CalWORKs. Below, we examine relationships between reported barriers and the likelihood of working and receiving cash assistance.

### **Which Barriers Impeded Work?**

In our models for San Joaquin County, we combined administrative records with survey information in order to assess whether those who reported barriers were less likely to be working than those who did not, holding other factors constant. We defined six mutually exclusive combinations of welfare and work that respondents could have engaged in during each of the 16 quarters we tracked them (1998–2001):

- ▶ Welfare only (CalWORKs and no earnings)
- ▶ Combining CalWORKs and part-time work (working fewer than 32 hours per week)
- ▶ Combining CalWORKs and full-time work (working 32 hours or more per week)
- ▶ Part-time work only (no CalWORKs)
- ▶ Full-time work only (no CalWORKs)
- ▶ Neither (no CalWORKs and no earnings)

We used 32 hours per week as the cut-off for full-time work because nonexempt single-parent CalWORKs adults are expected to work an average of 32 hours per week over the course of a month. We determined the number of hours worked by dividing quarterly earnings recorded in state administrative data by the state minimum wage in force during each of the 16 quarters we tracked recipients' earnings and welfare use.

► ***Association of reported barriers with work and welfare outcomes***

Greater numbers of barriers were associated with being more welfare-reliant in any particular quarter. This was a strong pattern. Compared with those who reported no barriers, those who reported three or more barriers (61% in wave 1 and 46% in wave 2) were at least twice as likely to be unemployed and receiving CalWORKs benefits as they were to be working (any number of hours) or combining work with cash aid. Those who reported just one barrier (16% in wave 1 and 18% in wave 2) were less than half as likely to be working full-time, either alone or in combination with CalWORKs. In other words, having many barriers to employment appears to impede working at all, and experiencing even one barrier appears to interfere with working the required 32 hours per week.

► ***Association of specific barriers with work and welfare outcomes***

The two individual barriers most often associated with an increased likelihood of welfare reliance in a given quarter were transportation and child care problems.

Compared with those who did not own a car or have a driver's license, those who did (49% in wave 1 and 54% in wave 2) were three to four times more likely to be working full-time, either alone or in combination with CalWORKs, than to be receiving cash aid alone. Compared with those who needed additional child care, those who did not (75% in wave 1 and 92% in wave 2) were more than twice as likely to be working full-time, either alone or in combination with CalWORKs, than to be receiving cash aid alone.

Although lack of transportation and child care impeded full-time work, respondents who reported these problems were generally able to engage in part-time employment at the same rates as other respondents. There was one exception: those who reported a transportation barrier were 1.7 times as likely to be receiving CalWORKs alone as to be combining it with part-time work.

Recent work experience was also strongly associated with an increased likelihood of working, either alone or in combination with CalWORKs. In comparison to those with no recent work experience, those who had worked every quarter between the beginning of 1994 and the end of 1997 were between six and 13 times more likely to be working at least part-time than to be receiving cash assistance alone.

► ***Simulations that eliminate barriers***

When we simulated removing from our sample all child care difficulties for a typical CalWORKs recipient in San Joaquin County, the probability of working full-time, either alone or in combination with cash assistance, increased from 13% to 67%. Similarly, removing transportation difficulties increased the probability of working full-time from 20% to 37%. Finally, in a simulation that reduced the number of reported barriers from five or more to zero, we found that the absence of barriers increased the probability of working full-time from 12% to 54%.

These predicted increases are large. Still, our models predicted that, even with zero barriers, this hypothetical respondent had between a 33% and a 47% probability of working less than full-time.

## **POLICY IMPLICATIONS AND RECOMMENDATIONS**

Inadequate child care and transportation limited full-time work among our sample of single-parent CalWORKs recipients in San Joaquin County more consistently than other barriers. Our analysis implies that providing more help with transportation and child care will increase full-time work among welfare recipients and recent welfare leavers in counties like San Joaquin. Of the two, transportation difficulties were more prevalent and persistent for our sample.

Although the state faces severe budget problems, policymakers should strive to maintain child care and transportation subsidies at current levels. When revenues permit, they should consider providing more generous transportation subsidies and increasing the rate at which eligible households avail themselves of child care subsidies. Ideally, both child care and transportation subsidies should remain available to former recipients who are working for low wages and lack other sources of income.

Our analysis also suggests that experiencing even one barrier substantially reduces welfare recipients' ability to fulfill the 32-hour-per-week work requirement. Experiencing three or more barriers reduces their likelihood of working even part-time.

These findings support early screening and assessment of the numbers and kinds of barriers affecting CalWORKs recipients, followed by quick referral to appropriate services. Providing access to better-targeted services should make better use of scarce program resources and help low-income parents who are subject to time limits.



## 1. INTRODUCTION

In August 1996, the federal Personal Responsibility and Work Opportunity Reconciliation Act replaced Aid to Families with Dependent Children (AFDC) with Temporary Assistance for Needy Families (TANF). The TANF program imposes more stringent work requirements on aided adults than did the AFDC program, but also establishes a 60-month lifetime limit on federal cash assistance to low-income families with children.

To comply with the new federal TANF law, in 1997, California enacted the California Work Opportunity and Responsibility to Kids (CalWORKs) program. CalWORKs replaced the state's AFDC program, called Greater Avenues to Independence (GAIN), and, like the new federal law, established a 60-month lifetime limit on the number of months that adults can receive federal cash assistance. CalWORKs does not terminate all cash aid to households in which adults have reached their 60-month limits. Rather, the CalWORKs program provides a reduced cash grant, equal to the children's portion, to otherwise eligible households in which adults have exceeded 60 countable months of aid. In California, counties administer welfare programs, and they began transitioning GAIN recipients to the CalWORKs program between January and May of 1998.

The CalWORKs program continued and extended many policies developed under the prior law AFDC/GAIN programs. Thus CalWORKs takes a work-first approach, requiring work, work-related training, or job search for all recipients who do not qualify for basic education or meet exemption criteria.<sup>1</sup> It encourages employment among CalWORKs recipients by increasing the amount of the cash assistance grant that they retain while working. However, CalWORKs imposes tougher work requirements on adult recipients than did the GAIN program: Those who are not exempt from work requirements must engage in work or work activities for an average of 32 hours a week after receiving aid for 18 months (the welfare-to-work time limit).<sup>2</sup> In California, the penalty for failing to comply with work requirements (like the penalty for exhausting the time limit) is a grant reduction, not grant termination.<sup>3</sup>

Given the CalWORKs program's intensified focus on moving recipients from welfare to work, it becomes more important that policymakers understand whether and to what extent adult recipients may be impeded from working. Impediments or barriers to work may stem from problems related to health, family responsibilities, human capital, or transportation. The longitudinal study of which this report is a part examines the prevalence and permanence of potential barriers to employment among a sample of adults in San Joaquin County who were receiving CalWORKs cash assistance on behalf of themselves and their children, or their children only (in the case of

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<sup>1</sup> The success of state work-first programs, as well as the influence of the robust economy of the mid- and late-1990s, in enabling welfare recipients in general to find and retain employment after leaving welfare has been studied elsewhere (Becerra, 1998; Grogger, 2003; Hamilton, 2002; Loprest, 2003; Miller, Knox, et al., 2000).

<sup>2</sup> Households with two aided adults must engage in at least 35 hours per week of work or work activities, and those who were receiving aid when the CalWORKs program began were allowed 24 months before they had to meet the work requirement.

<sup>3</sup> The time period of this study ends before any adult could have exhausted his or her lifetime time limit. For other details of California's GAIN and CalWORKs programs, see Zellman et al., 1999. For more information about the implementation of lifetime time limits in California, see Crow and Anderson, 2004 (available at <http://wprp.ucop.edu>).

adults in sanction status), in early 2000. In this report we focus on evaluating the role of barriers and other factors in these recipients' ability to work at part- and full-time jobs.<sup>4</sup>

State law sometimes allows and sometimes mandates counties to provide access to a variety of services aimed at helping CalWORKs recipients overcome barriers to work, including treatment and services to address problems related to substance abuse, mental health, and family violence, as well as supportive services such as child care and transportation assistance. While we do not assess the extent to which study respondents who faced barriers were able to overcome them with county assistance, we do assess the extent to which their reported barriers are correlated with employment, either alone or in combination with receipt of cash assistance. Thus the findings from this study can be used to guide decisions about the services that will be of greatest assistance to recipients striving to meet the CalWORKs work requirement.

### **Study Findings and Limitations**

The sample selected for the study included only current CalWORKs recipients who were obliged to meet the work requirements of the program in early 2000 in San Joaquin County and who could be interviewed in English, Spanish, Cambodian, or Vietnamese (see Appendix A for further details). In the analyses presented in this report, we further restrict the sample to respondents who were members of single-parent cases, hypothesizing that different dynamics are at play for two-parent households. This is particularly true because we examined outcomes using administrative data on welfare use and employment matched to the survey respondent only, not to spouses or other members of the assistance unit. Two technical reports that summarize the survey data collected for this study also provide information about the two-parent families in the sample (NDMS, 2002; NSD, 2002).

In brief, we find that reporting at least one barrier was extremely common among members of the study sample. However, some barriers appeared to be transient or episodic; that is, markedly fewer individuals reported the barrier at both waves of the survey than reported it at one wave. Nevertheless, our multivariate analysis shows a strong correlation between the numbers of barriers reported and the likelihood that an individual was working the equivalent of a part- or full-time, minimum-wage job: The more barriers a respondent reported, the less likely he or she was to be working full-time, and reporting a large number of barriers was associated with a significant reduction in part-time work as well. Finally, we can single out child care and transportation problems as barriers that were consistently and strongly associated with poorer work outcomes and greater reliance on welfare.

These results must be interpreted cautiously for three reasons. First, this sample, like any cohort sample of welfare recipients, is not truly representative of the state's welfare population at the current time. Second, it is possible that our analyses failed to incorporate other factors (other potential barriers to employment or resources that aid employment) that could affect respondents' earnings and reliance on CalWORKs. Finally, some respondents may perceive a situation they face as a barrier (for instance, lack of child care) because they desire to work (or to increase their hours of work), while others do not report the same situation as a barrier because they are not seeking employment. In our analyses we cannot account for such decisions that affect respon-

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<sup>4</sup> This report augments two technical reports documenting and analyzing the first- and second-wave surveys conducted as part of this study: Norris, Dasinger, Miller, and Speiglmán, 2002; Norris, Speiglmán, and Dasinger, 2002. We refer to these earlier documents as NDMS 2002 and NSD 2002 throughout this report.

dents' perceptions of barriers. Still, this study's findings are consistent with recent research on barriers to employment conducted elsewhere in California and the United States.

Section 2 provides a brief background on San Joaquin County, Section 3 describes the prevalence and persistence of barriers across the two waves of the survey, Section 4 discusses the findings from the multivariate analysis of the data, and Section 5 concludes with a brief summary and policy implications.

## 2. COUNTY CONTEXT

In this section we provide background information on welfare use and employment opportunities in San Joaquin County as compared to the state as a whole. Table 1 presents summary demographic and economic information. The county demographic profile differs in some respects from the statewide profile: The proportion of Asian and Pacific Islanders was about one-third higher than in the state as a whole in 2000. The average monthly CalWORKs reciprocity rate in San Joaquin County was 7.0% as compared to the statewide average of 4.4%. In addition, the county had about 40% more two-parent families in the CalWORKs caseload as compared to the state as a whole (15.2% as compared to 10.9%). Per-capita personal income was about 70% of the statewide average in 2000. Other research using census data shows that the poverty rate is strikingly higher in the San Joaquin Valley than in the state as a whole: 22% as compared to 13% (Reed, 2004).

Table 1  
Demographic and Economic Characteristics of the County and State

	San Joaquin /Lodi-Stockton MSA	California
Population (2000)	568,300	34,207,000
White, excluding Hispanic (1999)	50.8%	48.9%
Hispanic (1999)	27.2%	29.0%
Asian or Pacific Islander (1999)	16.2%	12.0%
Black (1999)	5.8%	7.4%
American Indian, Eskimo, or Aleut (1999)	1.1%	0.9%
Average monthly CalWORKs recipients per capita (2000)	7.0%	4.4%
Average monthly CalWORKs caseload (2000)	13,609	541,633
Average monthly CalWORKs single-parent (AF) caseload (2000)	7,158	325,910
Average monthly CalWORKs two-parent caseload (2000)	2,066	58,991
Unemployment rate (2000)	8.8%	5.0%
Civilian labor force (2000)	259,925	17,090,825
% of civilian labor force in farm employment (2000)	6.4%	2.4%
Per-capita personal income (2000)	\$23,242	\$32,363

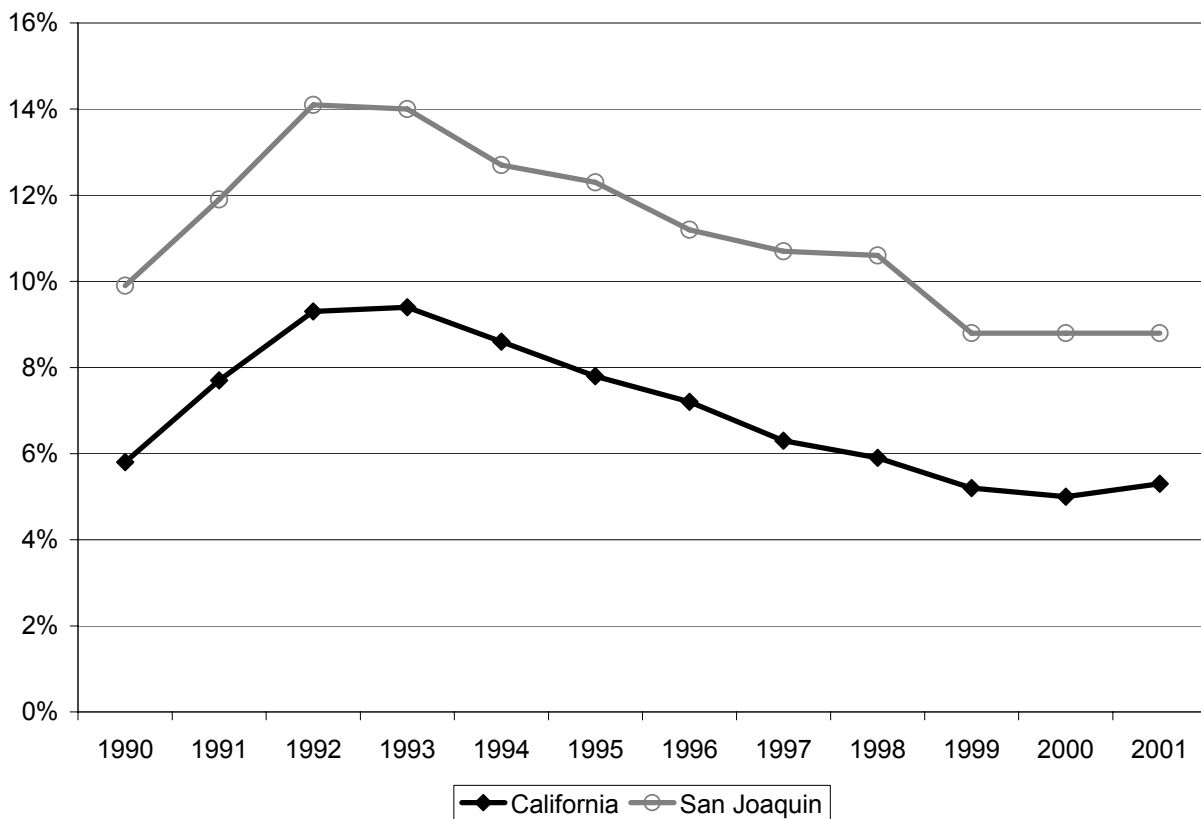
Sources: RAND California: An Online Source for California and U.S. Statistics; California Department of Social Services, Research and Development Division, CA237 CW.



It seems likely that a higher-than-average percentage of CalWORKs recipients in San Joaquin County are employed in the farming sector of the labor market.<sup>5</sup> Although only a small fraction of the civilian labor force is engaged in farming, it is well over twice the percentage of that in the state as a whole. In Appendix E we present evidence of strong seasonality in employment among sample members from this study, which is consistent with the conclusion that substantial numbers of low-income residents are employed in sectors that experience seasonal employment fluctuations.

While San Joaquin’s unemployment rate was markedly higher than the statewide rate throughout the 1990s, the trend in San Joaquin county tracked the trend in the state: The unemployment rate rose sharply in the early 1990s and declined more gradually through the rest of the decade to a level below that of a decade before, then remained flat in 2000 and 2001 (see Figure 1).

Figure 1  
**Unemployment Rate, Statewide and in San Joaquin County**



Source: RAND California: An Online Source for California and U.S. Statistics.

<sup>5</sup> Brady, Sprague, Gey, and Wiseman (2004) present a detailed discussion of the seasonality of welfare use and employment across different types of California counties. They classify San Joaquin as a “mixed” county, with higher agricultural employment than urban counties but also more urbanization than rural or agricultural counties.

### **Implementation of CalWORKs in San Joaquin County**

According to the RAND statewide CalWORKs implementation survey, San Joaquin County reported that it began moving its cases from AFDC to CalWORKs on March 23, 1998, and completed the transition on December 31, 1998 (Zellman et al., 1999). The 18- or 24-month welfare-to-work clock does not start until a recipient signs a welfare-to-work plan developed with, and approved by, the recipient's county CalWORKs case manager<sup>6</sup>. RAND research indicates that most county welfare departments did not make work-plan-related appointments with recipients until well into 1999 (Klerman et al. 2000, 36). Information from respondents in our study sample casts some doubt on even this conclusion. At each wave of the survey, respondents were asked whether they had ever signed welfare-to-work plans. Only 63% responded in the affirmative at either Wave 1 or Wave 2 (NSD 2002).<sup>7</sup> Thus, the available information suggests that the earliest that those in our study sample reached their 18- or 24-month welfare-to-work time limit was sometime in 2001.

Although our survey respondents faced a more difficult economic climate and greater seasonal employment than in the state as a whole, they did see an improving economy over the time period that we examined. Members of the study sample were also enrolled in a new welfare program early in the time period we reviewed, and, in the final year of analysis, likely exhausted their 18- or 24-month welfare-to-work time limits. In the next sections we present information about the barriers that these recipients faced and their patterns of work and welfare use over time.

### **3. PREVALENCE AND PERSISTENCE OF BARRIERS IN SAN JOAQUIN COUNTY**

In this section we report the prevalence of the potential barriers to employment that we use to predict respondents' work and welfare outcomes in Section 4. We also assess the degree to which the same individuals experienced the same barriers at both interviews, which took place in 2000 and 2001.

We consider it to be an empirical question whether any one of the problems we refer to as barriers actually prevents or limits a respondent's employment. It is, in fact, plausible that some difficulties might encourage work. For example, a respondent with an abusive partner may be more likely to work, either to limit exposure to abuse or to earn enough to be able to leave that partner. Further, some potential barriers, such as health and behavioral health problems, wax and wane in severity, constituting barriers at some times or under some conditions, but not others. It is also important to note that all definitions of potential barriers in this study are based on self-reports, and thus are neither clinical diagnoses of health-related problems nor independent confirmations of problems that respondents reported.

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<sup>6</sup> Non-exempt recipients have an 18- or 24-month time limit before they must be working or participating in approved work activities for 32 or more hours per week. Counties could require recipients to be working 32 hours per week by an earlier date.

<sup>7</sup> The results reported here include two-parent cases. About the same fraction of respondents who reported having a spouse or partner reported that the spouse or partner had signed a welfare-to-work plan. It is unclear whether all respondents or their spouses or partners would have been required to sign a plan. Before the fall of 1999, individuals who were working when they entered the CalWORKs program were required to sign a plan in some counties. In September 1999, California's Department of Social Services amended the CalWORKs regulations to make signing a plan optional for those with a sufficient level of employment. See Klerman et al., 2000.

We organize our discussion around four categories of potential barriers to work: (1) health-related barriers (physical health, mental health, family violence, and substance abuse), (2) human capital barriers (few work skills, limited education, limited language proficiency, and criminal justice system constraints), (3) family responsibilities (needing more child care, and child requiring extra care), and (4) transportation problems (no car, or no driver's license).<sup>8</sup> Appendix B defines these potential barriers to employment in detail.<sup>9</sup> We limit our discussion of barrier prevalence in this report to respondents who were members of a single-parent case when they were sampled. We summarize demographic characteristics of the sample in Appendix A.

Table 2 presents the percentage of respondents reporting each potential barrier at the two waves of the survey. An important question is how enduring each of these potential barriers is in the lives of current and former welfare recipients. For this reason, Table 2 also shows the percentage of respondents that experienced each potential barrier at both waves, and the percentage that experienced the barrier at one wave only. Except where otherwise indicated, the survey questions asked about conditions or events in the 12 months prior to the survey date.

### **Prevalence of Barriers**

We begin by discussing the prevalence of employment barriers at Wave 1 and comparing the prevalence of barriers among our sample of current or recent welfare recipients to the prevalence of barriers reported in other research. Studies in other states and elsewhere in California show that poor, single parents face numerous barriers to employment. We found the same thing. In 2000, only 8% of the adults we interviewed reported having none of the barriers we studied, 16% reported just one barrier, 20% reported two, and 57% reported three or more.

More than half reported at least one barrier related to human capital (63%), health (59%), or transportation (51%). About a third (34%) reported at least one barrier related to family responsibility, such as insufficient child care (25%) and/or having a child with health or other problems who required a lot of care (16%).

The prevalence of individual barriers in San Joaquin County is largely similar to that reported in studies conducted in the District of Columbia, Illinois, Maryland, Michigan, as well as Alameda, Kern, and Stanislaus counties in California, during approximately the same time period—although estimates of the prevalence of some types of barriers varied widely across studies, and it is sometimes difficult to compare across studies because barrier definitions vary (Acs and Loprest, 2003; Chandler et al., 2003; Corcoran et al., 2003; Danziger et al., 2000; Dasinger et al., 2001; Driscoll et al., 2000; Kirby, et al., 2003; Meisel et al., 2003; Ovwigho et al., 2004; Speiglmann et al., 2003; Zedlewski, 2003).<sup>10</sup>

### **Health**

In San Joaquin County, 24% of the sample reported two or more physical health problems that interfered with working in 2000, while in Alameda County the prevalence of two or more physical health problems in 2000 was 19%. The Illinois study found that 21% of their sample had a general health problem, and the District of Columbia study found that 16% had a physical health

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<sup>8</sup> The public transportation system in the county is not extensive, and most inhabitants rely on private cars for transportation.

<sup>9</sup> Appendix A contains details of the data collection; further detail is available in NDMS 2002 and NSD 2002.

<sup>10</sup> For estimates of selected barriers among welfare recipients in Los Angeles County derived from county administrative records, see Burns et al., 2003.

Table 2  
**Prevalence of Potential Barriers, Wave 1 Versus Wave 2,  
Among Persons in One-Parent CalWORKs Cases Interviewed Twice in San Joaquin County (N=202)<sup>1</sup>**

	Wave 1 prevalence		Wave 2 prevalence		Change	Present at both waves		Present at only one wave	
	%	N	%	N		%	N	%	N
<b>Barriers</b>									
<b>Health-Related</b>									
Physical health									
Physical health problems	19.3	43	14.3	32	-5.0	6.8	18	19.9	39
Activity limitation	18.2	43	14.6	33	-3.6	7.8	18	17.3	40
Mental health									
Mental health symptoms	18.2	37	14.7	32	-3.5	10.2	22	12.4	25
Family violence									
Partner violence/control	13.1	23	11.1	19	-2.0	4.8	8	14.6	26
Substance abuse									
Alcohol or drug abuse (DSM-IV)	23.9	45	23.2	42	-0.7	13.3	24	20.6	11
<b>Any health-related (5)</b>	59.1	120	48.4	97	-10.7				
<b>Human Capital</b>									
Few work skills	33.1	81	27.0	66	-4.1	22.4	56	15.3	35
Limited education	49.7	111	47.2	105	-2.5	47.2	105	2.5	6
Limited English proficiency <sup>2</sup> (reading, writing, or speaking)	13.2	47	12.3	46	-0.9	10.9	41	3.6	11
Language ability limits working	16.2	67	11.4	43	-3.8	9.1	37	9.3	36
Criminal justice system involvement	14.3	25	9.1	16	-5.2	6.7	12	10.1	17
<b>Any human capital (4)</b>	63.3	137	58.1	126	-5.2				
<b>Family Responsibility</b>									
Child care—needs more than has	24.5	47	8.1	15	-16.4	1.7	3	29.2	56
Child required a lot of care	16.5	31	15.5	29	-1.0	8.5	15	15.0	30
<b>Any family responsibility (2)</b>	34.2	66	22.6	42	-11.6				
<b>Logistic</b>									
No car or license	51.4	104	45.8	93	-5.6	41.1	84	15.0	29
<b>Any logistic (1)</b>	51.4	104	45.8	93	-5.6				
<b>Count of barriers (12)</b>									
0	7.9	13	15.3	28	+7.4				
1	15.9	29	18.3	33	+2.4				
2	19.8	38	20.7	40	+0.9				
3-4	35.0	70	32.3	71	-2.7				
5+	21.5	52	13.4	30	-12.3				
Maximum observed		8		7	-1				
<b>Average number ( p &lt; .001)</b>		<b>3.0</b>		<b>2.4</b>	<b>-0.6</b>				
<b>Type of child care</b>									
Child care provided by family	51.7	102	47.0	92	-4.7	32.7	65	33.3	64
Nonfamily child care	14.3	25	9.4	16	-4.9	2.4	4	18.9	33

<sup>1</sup> Percentages are weighted; numbers of observations are unweighted.

<sup>2</sup> Asked only of respondents who reported speaking a language other than English at home. Not included in the total count of barriers.

problem. Between 42% and 46% of the Michigan sample reported a physical limitation at one or more waves of the survey.

About 18% of the San Joaquin sample reported mental health symptoms severe enough to require treatment in the seven days prior to the survey. Estimates of the percentage of welfare recipients in Alameda, Kern, and Stanislaus counties who experienced mental health problems ranged from 19% to 30%. Similarly, researchers in Illinois reported that 25% of the welfare recipients they sampled had mental health problems; likewise, research on the TANF caseload in the District of Columbia found that 21% had mental health problems. The Michigan three-wave longitudinal survey, conducted between 1997 and 2002, found that between 27% and 33% of their sample reported mental health problems at one or more waves of the survey.

National estimates from the National Survey of America's Families (NSAF) put the percentage of current welfare recipients who experienced very poor mental or physical health at more than a third. In the Michigan study, over half of the sample reported mental or physical health problems at one or more waves of the survey. In Alameda and San Joaquin counties in 2000, using a more restrictive definition, the fraction of respondents who reported either two or more physical problems or mental health symptoms needing treatment was 31% and 38%, respectively.

Estimates of the prevalence of recent family violence cluster around 15%, with a few outliers. The prevalence of physical abuse in the 12 months preceding the interview was 16% in Kern and 25% in Stanislaus County. Physical violence at the hands of a boyfriend, partner, or spouse was reported by 15% of TANF recipients in an urban county in Michigan in 1997, and by 13% in Illinois, while 15% of respondents in Washington, DC and in Maryland reported severe physical violence in the past year. In San Joaquin and Alameda counties, 13% and 12% reported a controlling or violent partner (relying on a broader definition of family violence than that used in the other studies), respectively.

In San Joaquin County, almost 24% of the sample reported one or more symptoms of alcohol or drug abuse. Using a more restrictive definition, researchers reported that about 8% of respondents in Alameda County exhibited symptoms of alcohol dependence in 2000; in Kern and Stanislaus counties, researchers also classified about 8% of the samples as alcohol or drug dependent. The District of Columbia, Illinois, and Michigan studies found lower rates of alcohol and/or drug dependence of 2%–3%, while the Maryland study found the prevalence of chemical dependence to be 6%.

### ***Human Capital***

At Wave 1 of this San Joaquin study, 33.1% of respondents reported few work skills, while estimates from other studies ranged from 21% in Michigan to 42% in Kern County. Likewise, 49.7% of the San Joaquin sample lacked a high school diploma or GED. Estimates of the fraction of welfare recipients who lack a high school diploma or GED in the other studies range from 31% in an urban county in Michigan to 52% in Kern County. National estimates drawn from the NSAF indicate that in both 1999 and 2002, over two-fifths of current welfare recipients reported less than a high school education.

The prevalence of limited English proficiency varies widely across studies, no doubt due to the variation across geographic regions in the level of recent immigration. Language limitations are

an important issue in San Joaquin County because the county contains a sizable population of recent, legal immigrants (undocumented immigrants are prohibited from receiving federal or state cash assistance).<sup>11</sup> In San Joaquin in 2000, 16% reported that their English proficiency was limited, while in Alameda County 7% reported the same. In Kern County 7% reported limited English, and in Stanislaus County 1% did so. Two percent of the Illinois sample reported difficulty with English, while the other studies did not report respondents' level of proficiency in English. All San Joaquin County respondents—both those whose native language was English and those who spoke another language at home—were also asked whether their ability to read or write interfered with their ability to find or keep a job. Thirteen percent reported that it did.

In Alameda County, the prevalence of self-reported recent arrest, prison or jail time, or parole or probation status in 2000 was 8%, while in San Joaquin it was 14.3%. Note, however, that when researchers studying welfare recipients in Illinois obtained correctional records, they found that an estimated 36% of the population they sampled had at least one arrest, and an estimated 18% had criminal convictions in a period of time that spanned five years before their interviews and nine months afterward.<sup>12</sup>

### ***Family Responsibility***

Twelve to 42% of respondents across these studies reported problems with child care. In San Joaquin County, the prevalence of child care problems was 24.5% in 2000. In addition, about 17% of San Joaquin respondents reported having a child who needed a lot of care (that is, a special-needs child). The figure was 20% in Alameda County and 30% in Illinois among a TANF recipient sample. In the District of Columbia, 26% reported caring for a child with health or behavioral problems.

### ***Logistics***

Estimates of lacking a car or driver's license did not vary substantially across studies: about half of those asked lacked a driver's license and/or a car.

### **Persistence of Barriers Over Time**

Although experiencing at least one barrier was quite common in the San Joaquin sample, among this group of single parents the prevalence of barriers declined in every category between the two waves of the survey. In addition, the fraction of the sample that reported a large number of barriers (five or more), also fell by about half, from 25.7% to 13.4% of respondents.

Many barriers did not persist between Wave 1 and Wave 2 of the survey. Not only did fewer people report barriers at the second wave, but different people reported a particular barrier at each wave of the survey. For instance, while 19.3% of the sample reported physical health to be a barrier at Wave 1 and 14.3% reported it at Wave 2, only 6.8% reported this barrier at both waves. Most strikingly, while 24.5% of the sample reported lacking needed child care at Wave 1 and 8.1% did so at Wave 2, only 1.7% reported this problem at both waves of the survey.

Still, the prevalence of a number of barriers—alcohol or drug abuse, limited education, limited English ability, and a child requiring a lot of care—did not change by very much over time. Not

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<sup>11</sup> Readers may also be interested in the reports from a WPRP-commissioned study examining immigrants' use of public assistance programs in California. Brady et al. (2002) is available at <http://wprp.ucop.edu>. The final report from this study is forthcoming and will also be posted on the WPRP web site.

<sup>12</sup> The Michigan study did not ask about respondents' involvement with the criminal justice system.

surprisingly, some barriers persist because they require a lengthy period of time to overcome: Almost everyone who reported limited education at the first wave also reported it at the second wave, and many of those who reported limited English ability at one wave reported it at both waves. One persistent barrier that does not necessarily require a long time to overcome, but does require significant financial resources, is transportation: At both waves about half of the sample reported having no access to a car or no driver's license. The large majority of those who reported this transportation barrier at one wave reported it at both waves.

Overall, however, a surprisingly large number of barriers did not persist between the two waves of the survey. For some barriers, like mental health problems, this lack of persistence may be attributable to the episodic nature of the problem. For others, the barrier may simply have been transient. Unless respondents developed greater inhibitions about reporting barriers at the second wave of the survey, it is unlikely that reticence is behind the transience of barriers. However, it is possible that respondents perceived some barriers as being less salient over time. This may be particularly true for a group that was responding to county pressure to begin working. That is, some issues that respondents reported as barriers when they were not employed may no longer have been perceived as barriers once respondents had found a way, at least temporarily, of circumventing them.

In summary, while the prevalence of barriers was quite high in this sample, it declined over time, and often respondents did not report the same barriers at both waves of the survey. We turn next to examine correlations, holding other factors constant, between the barriers just discussed and welfare and work outcomes over time.

#### **4. ASSOCIATIONS BETWEEN BARRIERS AND PATTERNS OF EMPLOYMENT AND WELFARE USE**

In this section we analyze the relationship between potential barriers to employment and patterns of employment and welfare use. In the analyses presented, we examine the effects of the barriers for which we reported prevalence and persistence in the previous section, and hold constant additional factors that may also have affected whether a respondent worked or received cash assistance. These additional factors include the economic climate in San Joaquin County, the respondent's age, sex, and race or ethnicity, and the number of younger and older children that a respondent had.<sup>13</sup> Appendix F provides the detailed results for all of the factors that we include in the analysis.

We can learn from this analysis which barriers and other factors were associated with the ability of a group of welfare recipients to move from welfare to work as the CalWORKs program was being implemented in California.<sup>14</sup> We follow a cohort of single-parent recipients for 16 quarters from January 1998 through December 2001. This cohort was receiving CalWORKs in San Joa-

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<sup>13</sup> Table 4-3 in NSD 2002 presents bivariate correlations between working and individual barriers and between receiving welfare and individual barriers.

<sup>14</sup> Other recent California-focused studies that follow recipients over time include the Alameda County CalWORKs Needs Assessment and Outcomes Study (Dasinger et al., 2001; Driscoll et al., 2000; Green, et al., 2000; Speiglmán et al., 1999; Speiglmán et al., 2003); the CalWORKs Project (Chandler et al., 2003; Chandler and Meisel, 2002; Chandler and Meisel, 2000); the RAND California Health and Social Services Survey (CHSSS) (Klerman et al., 2002); and the SPHERE Institute leavers studies (MaCurdy et al., 2003).

quin County in March 2000 according to county records.<sup>15</sup> This time period covers the first two years of CalWORKs operations, 1998 and 1999, when the state and counties first implemented the new program. The state also experienced a robust economy during almost the entire time period, implying that those at risk of receiving welfare saw expanded employment opportunities.<sup>16</sup>

It is important to recognize that any sample selected at a single point in time will capture disproportionately high numbers of long-term welfare recipients (Bane and Ellwood, 1994). Our sample is, therefore, not representative of the San Joaquin County caseload over time, but rather, of those who may have more difficulty in moving from welfare to work because of their history of receiving aid. In addition, the selection criteria, which limited respondents to those subject to work requirements, render the sample not representative of the full San Joaquin caseload even at the time the sample was selected. Therefore, results of this analysis do not apply to *all* welfare recipients in San Joaquin County, but focus instead on the largest segment of the caseload population, those whom policymakers crafting the TANF and CalWORKs programs presumably intended should move from welfare to work.

We defined six mutually exclusive and exhaustive welfare and work status outcomes that respondents could have experienced during each of the 16 quarters that we follow them: receiving CalWORKs benefits, not working; combining work and CalWORKs, but working part-time; combining full-time work with CalWORKs; working part-time (no CalWORKs benefits); working full-time (no CalWORKs benefits); and neither working nor receiving CalWORKs benefits. Since we use state-level data to track the cohort over time, we capture both cash welfare receipt and employment in all California counties.

The analyses in this report focus on respondents' ability to comply with CalWORKs work requirements—that is, whether single parents were employed 32 or more hours per week—not their total household income or earnings. Other findings from the survey indicate that mean monthly household income among this sample increased from \$1,780 in 2000 to \$2,441 in 2001, with the growth attributable to increased earnings from employment. Income from public assistance (including, but not limited to, cash assistance) remained flat across the two waves of the survey (NDMS, 2002).

### **Definitions of Welfare and Work**

To capture employment we use the California Employment Development Department's Unemployment Insurance Base Wage File (UIBWF), which records employees' quarterly earnings. This dataset includes all employees whose employers contribute to the state unemployment insurance system. Therefore, earnings from self-employment and under-the-table employment are not included in the database, and neither are earnings by federal government employees (Hotz and Scholz, 2000).

The UIBWF does not record hourly wages, so we are unable directly to observe hours of work. Instead, we estimated the number of hours worked by dividing quarterly earnings by the state minimum wage in force during each of the 16 quarters we tracked recipients' earnings and reli-

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<sup>15</sup> It is possible that respondents were in sanction status when they were selected for participation in the survey.

<sup>16</sup> While we include the unemployment rate in our models, we recognize that it is an imperfect measure of the economic opportunities available to welfare recipients.



ance on welfare.<sup>17</sup> We used 32 hours per week as the benchmark for full-time work because after July 1, 1999, nonexempt single-parent CalWORKs adults were expected to work (or engage in state-approved work activities) for an average of 32 hours per week over the course of a month.<sup>18</sup> Those who had positive earnings up to \$2,399 in a quarter (by the end of the study period) are categorized as working “part-time,” and those who earned \$2,399 or more per quarter are categorized as working “full-time.”

Because earnings are recorded quarterly and not monthly or weekly, and because the dataset does not include information about hourly wages, this calculation results in miscategorization in some cases. For example, it could overstate the number of adults working full-time (32 or more hours per week) by including in that category adults who worked fewer hours at higher hourly wages: someone working 26 hours per week at an hourly wage of \$7.05 (the 20<sup>th</sup> percentile wage for all workers in California in 1999) would earn approximately the same amount per quarter as someone working 32 hours per week at the minimum wage (\$5.75 for most of the period under study).<sup>19</sup> For this reason, the earnings cut-off we use only approximates the hours of work required by the CalWORKs program. The more often members of our sample worked part-time at high wages, the greater the miscategorization.

By the same token, this calculation will count as part-time (fewer than 32 hours per week) those who worked full-time at minimum wage for only part of the quarter. However, this group arguably does belong in the part-time work category since these adults worked only sporadically. In the CalWORKs program, recipients’ hours of work are averaged over the span of a month in order to determine compliance with the weekly work requirements.

The administrative data that we use to track CalWORKs receipt is the Medi-Cal Eligibility Determination System, or MEDS. It is an official record of those on Medi-Cal, California’s Medicaid program. Since all those on CalWORKs are automatically enrolled in Medi-Cal, MEDS also accurately captures receipt of cash assistance in the AFDC/GAIN or TANF/CalWORKs programs. For our purposes, the main limitation of MEDS is that it does not clearly record months in which recipients are subject to fiscal penalties (sanctions) for failure to comply with program requirements.<sup>20</sup>

In San Joaquin during the period of our analysis, sanctioned adults were assigned Medi-Cal-only aid codes in MEDS. Thus, we record sanctioned respondents as not receiving cash assistance, even though, given California’s adult-only sanction policy, their children remained on aid. Between 2000 and 2002 the sanction rate in any one month in San Joaquin County ranged between 18% and 29% of those subject to work requirements.<sup>21</sup> In this analysis therefore, those who were in sanction status could fall into several categories: working part- or full-time (without CalWORKs benefits), or neither working nor receiving cash welfare benefits. Therefore, the results for part-time work in the absence of welfare should be interpreted with some caution.

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<sup>17</sup> The minimum wage was \$5.15 in the first three months of 1998, so the cut-point for that quarter is \$2,148. The minimum wage increased from \$5.75 to \$6.25 per hour on January 1, 2001, so the cut-point for quarters in 2001 is \$2,607. Since January 1, 2002 (after the period of our analysis), it has been \$6.75.

<sup>18</sup> Adults in two-parent families are required to work a combined total of 35 hours per week.

<sup>19</sup> Mishel et al., 2000. Available at: <http://www.epinet.org/>.

<sup>20</sup> Readers may also be interested in the analysis of administrative data on sanctioning practices (Ong and Houston, 2005) and the implementation of sanctions (Bagdasaryan, Matthias, Houston, and Ong, 2005) from a WPRP-commissioned study of sanctioning in four counties. Both are available at <http://wprp.ucop.edu>.

<sup>21</sup> Department of Social Services, WTW25. Available at: <http://www.dss.cahwnet.gov/research/>.

We also limit our interpretation and discussion of the “neither welfare nor work” category because this group is a catch-all: It can include those who are in CalWORKs sanction status and who do not have a regular source of income, but also those not receiving cash assistance at all who are self-employed, who have irregular income, or who receive substantial resources from other sources (e.g., partners, other family members).<sup>22</sup>

In Appendix D, we compare respondent reporting of both earnings and welfare use in the survey with the reporting of employment and welfare use in these state administrative data sources. In general, we find that survey and administrative reports of receiving CalWORKs agree quite well, although respondents are more likely to report having received a CalWORKs grant check in the 30 days prior to the survey even if MEDS does not record their CalWORKs participation. Much of this misreporting is likely due to sanctioning, which took noncompliant adults off the rolls but continued to pay (reduced) benefits for other eligible family members. There is somewhat more disagreement between administrative and survey records of employment, although the majority of reports do agree. This disagreement can be explained partly by disparate reporting periods (the past 30 days in the survey as compared to the past quarter in the UIBWF), partly by the fact that some survey respondents likely obtained work not covered by unemployment insurance, and partly, no doubt, by misreporting of income in both sources.

### **Welfare and Work Over Time**

We begin by describing the broad shifts over time in patterns of work and welfare among study respondents. Figure 2 shows how work and welfare among the survey sample evolved from 1997 through 2001. We include 1997 for reference; it is excluded from the multivariate models we report below because San Joaquin began transitioning AFDC cases to CalWORKs in March 1998, and our analysis focuses on the period during which the CalWORKs program was in effect.

The pattern is clear: reliance on welfare alone declines and work, alone or in combination with welfare, increases. The fraction of the respondents who were receiving CalWORKs only declined from about half to about a quarter of the sample. This pattern could have been prompted by improvements in the economic opportunities for this group, the inducements that the CalWORKs program provides to welfare recipients to work, the amelioration of the events that precipitated the welfare spell, or simply the aging of those in the sample (or, perhaps, the aging of their children). We distinguish as far as possible among these factors in the analysis below.

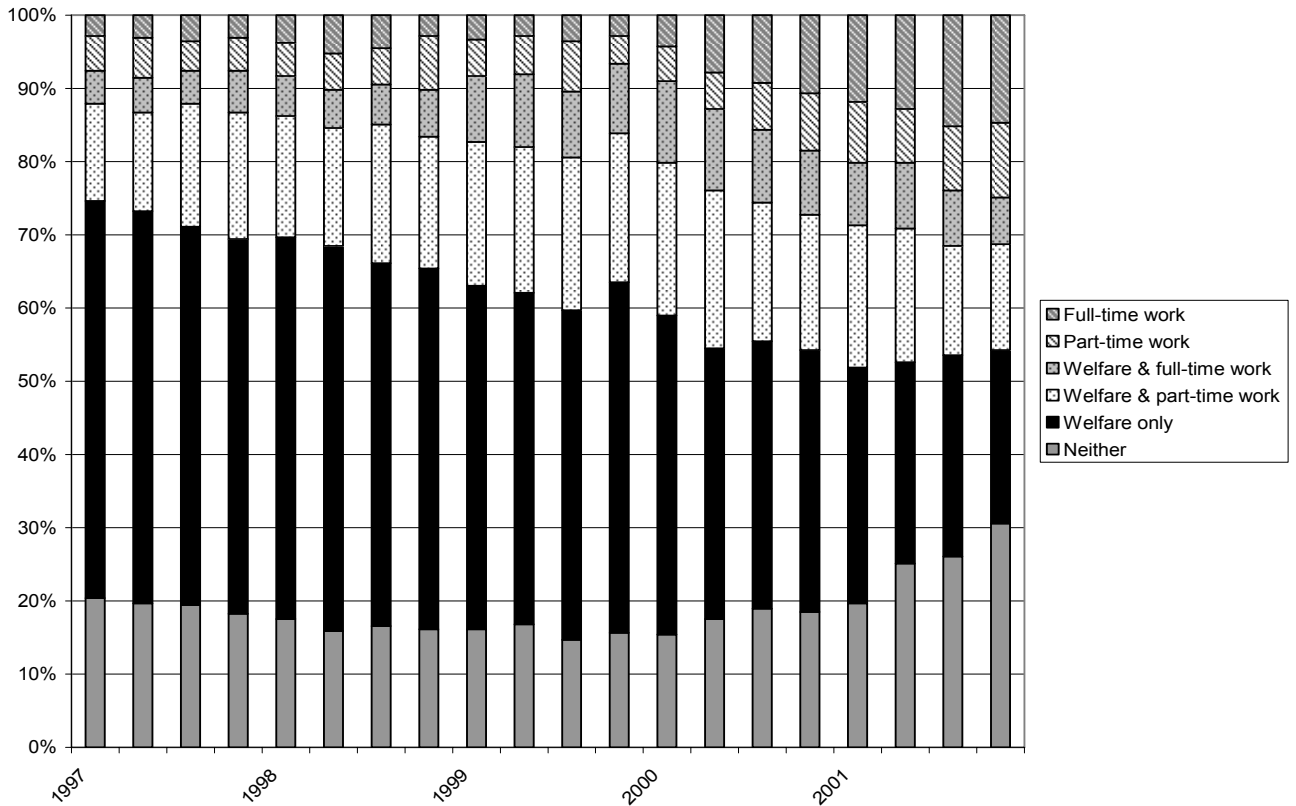
### **Effects of Barriers on Work Outcomes: Previous Research**

Others have examined the effects of potential barriers on work outcomes using multivariate analyses. By way of comparison, we discuss results from related studies that examine patterns of work without factoring in welfare use (Chandler et al., 2002; Corcoran et al., 2003; Danziger et al., 2000; Dasinger et al., 2002; Driscoll et al., 2000; Kirby et al., 2003; Speiglman et al., 2003; Tolman et al., 2002). All four reports that we discuss model the probability of working a certain number of hours at the interview date as a function of barriers and other covariates.

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<sup>22</sup> Here we do not measure the level of earnings or the family income, but rather compliance with CalWORKs program rules.

Figure 2  
**Employment and Welfare Use Over Time Among Survey Respondents**



### ***Transportation and Child Care***

All of the studies include a variable measuring transportation problems (e.g., no access to a car or no driver's license); the relationship between experiencing such a problem and working is negative in all but the Illinois study. Three of the four studies measure child care problems, and generally find a negative relationship between working and reporting insufficient child care.

### ***Health***

Reporting physical health problems is negatively associated with working across all studies that included this variable. In addition, reporting a mental health problem is sometimes negatively associated with working: the analysis of the first-wave data in Michigan, and in Kern and Stanislaus counties finds such an association. All of the studies measure drug and/or alcohol dependence, and generally do not find an association between measures of these potential barriers and working.

### ***Human Capital***

Having limited work experience and/or few job skills is also negatively associated with working across nearly all of the studies that measured these variables. Mixed evidence comes from the analysis of the Kern and Stanislaus County data: having few work skills is not associated with work outcomes at the first wave, but a negative correlation does emerge at the second wave. Lacking a high school diploma or GED is negatively associated with working only in the Michigan sample.

### ***Family Circumstances***

Having a young child in the household, having more children, a child with special needs, or a disabled child is not associated with whether a respondent worked in these studies. The evidence on domestic violence is mixed: all studies included it as a variable in their multivariate analyses, but a significant, negative correlation is found only at the second wave in the Kern and Stanislaus County data. However, this same study also found a positive relationship between domestic violence and working for the subset who were living with a partner. In addition, living with a spouse or partner, where it is measured, is generally not associated with whether respondents work, although the analysis of Kern and Stanislaus data finds a negative relationship at both waves.

A report using the second wave of data from the Michigan Women's Employment Survey comes the closest to our approach. Employing multinomial logistic regression, the researchers compare working less than 20 hours per week and using welfare ("welfare reliant"), not using welfare and working ("work reliant"), working 20 hours per week or more and using welfare ("combiners"), and neither on welfare nor working (Tolman et al., 2002).<sup>23</sup> In this analysis, transportation problems reduce the likelihood of being wage reliant, as does having young children or being pregnant, and limited work experience. Domestic violence, having less than a high school education, and reporting health problems are also barriers to wage reliance in this analysis. Transportation and child care are not factors in combining work and welfare as compared to being welfare-reliant; however, limited education, few job skills, pregnancy, and health problems are.

In sum, although the various studies sampled welfare recipients in different places and at somewhat different times, and measured somewhat different potential barriers and work outcomes, several patterns clearly emerge: lacking a car or a driver's license, experiencing problems with child care, experiencing physical health problems, and limited work experience or few job skills are consistently associated with a lower probability of working. An analysis of the Michigan data, using a modeling technique that is close to the one we employ, suggests that these patterns may vary for those who combine work with welfare as compared to those who rely on work alone.

### **Multivariate Analyses**

We turn now to our multivariate analyses. First we discuss the relationship between the number of barriers that respondents reported and their work and welfare outcomes, then we examine the relationships between individual barriers and patterns of combining work and welfare. Tables 3 and 4 provide the main findings; Appendix F presents detailed results. Unless otherwise noted, relationships that we report are significant at the 5% level. We report all relationships as ratios; the comparison category is "receiving welfare only." For instance, a ratio of 1.5 in the column labeled "combining part-time work and welfare" should be interpreted in the following way: those with this characteristic were 50% more likely to be combining part-time work and welfare than they were to be receiving welfare alone.

### ***Number of Barriers***

We begin with the relationship between the number of barriers and respondent outcomes, which we report in Table 3. In the model, we distinguish between reporting one barrier, two barriers, three or four barriers, and five or more barriers.

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<sup>23</sup> SSI recipients are excluded from the last category.

The information we possess about barriers is more limited than the information we have about work and welfare status. Barrier measurements were made only twice, at Wave 1 and Wave 2 of the survey, while the administrative data record quarterly earnings and monthly welfare receipt. With only two measurement points, barrier measures can only change once over the course of the study. This implies that we treat barriers as relatively fixed variables. Two measurements may not be sufficient to capture adequately the variability of some barriers, so that highly variable barriers are measured with a greater amount of error.

To the extent that barriers were poorly measured or were transient (without a lasting effect on work and welfare patterns when they were no longer acute), we would expect their associations with differential patterns of work and welfare over time to be weakened. We see this in many, but not all, cases.

As Figure 2 shows, between 1998 and 2001 there was a sizable increase in the likelihood that a person in the sample was working. Given this increase, we traded some accuracy in measuring individual barriers for the ability to analyze over time associations of barriers with various combinations of welfare and work. Thus, our multivariate analyses measure the average association of barriers over time with work and welfare outcomes.

Table 3 summarizes findings from a model that controls for individual demographic characteristics, work and welfare history, family characteristics, the passage of time, and county-level economic variables. We provide results from the full model in Appendix F. Figure 3 depicts the predicted probabilities for the possible combinations of work and welfare for a typical respondent reporting from zero to five or more barriers.

The model parameter estimates reported in Table 3 are somewhat difficult to interpret because they involve two simultaneous comparisons: The table shows the likelihood of working (alone or in combination with CalWORKs benefits) compared to the likelihood of relying entirely on cash aid for those who reported any barriers to employment compared to those who reported none.

Qualitatively, when read from left to right, the six columns in Table 3 depict the range of welfare and work outcomes, from the least desirable (relying entirely on CalWORKs benefits, in column 1) to the most desirable (employed full time and receiving no CalWORKs benefits, in column 6). When read from top to bottom, the rows move from the best situation (no reported barriers to employment, in the top row) to the worst situation (reporting five or more barriers, in the bottom row).

Generally, we see a pattern of decreasing ratios as we move from left to right and from top to bottom, which indicates that the better outcomes (more work, less reliance on welfare) were less likely for those who reported more barriers. For instance, the bottom right-hand cell of the table indicates that, holding all else equal, and compared to those reporting no barriers, those who reported five or more barriers were only 7% as likely to be working full-time as to be relying entirely on welfare.

Columns 3 and 4 indicate that reporting two or fewer barriers was not an impediment to part-time work either alone or in combination with CalWORKs. Compared to those who reported no barriers, those who reported a few barriers were no more or less likely to rely entirely on welfare than to work part-time. Reporting any barriers did reduce the likelihood of working full-time,

Table 3  
**Numbers of Barriers, Relative Risk Ratios**<sup>1,2</sup>

	1	2	3	4	5	6
	Welfare only	Neither work nor welfare	Welfare and part-time work	Employment only, part-time	Welfare and full-time work	Employment only, full-time
No barriers	comparison outcome	comparison category				
One barrier		0.61	0.73	0.76	0.47 **	0.39 ***
Two barriers		0.65	0.67	0.58	0.26 ***	0.26 ***
Three or four barriers		0.65	0.43 ***	0.50 **	0.15 ***	0.14 ***
Five or more barriers		1.02	0.47 ***	0.48 *	0.14 ***	0.07 ***

<sup>1</sup> Model includes 6344 quarterly observations on 398 respondents.

<sup>2</sup> Significance: \* significant at the .10 level; \*\* significant at the .05 level; \*\*\* significant at the .01 level .

however, and reporting three or more barriers lowered the probability of working either part- or full-time for both those who received CalWORKs and those who did not. For example, compared to those with no barriers, adults reporting three or four barriers were only 43% as likely to combine welfare and part-time work as to rely entirely on CalWORKs. Compared to those with no barriers, those with three or four barriers were only 14% as likely to rely entirely on earnings as to rely on welfare.

Finally, compared to those relying entirely on CalWORKs, barrier reports were not associated with an increased likelihood of the “neither work nor welfare” outcome (column 2). This is not surprising, given the heterogeneity of the circumstances of those who fell into this category.

### ***Individual Barriers***

Next, we take a closer look at individual barriers by estimating their relationships with the possible work and/or welfare outcomes: working and receiving CalWORKs benefits, relying entirely on CalWORKs, combining work and CalWORKs, or having neither source of support. Like the previous model, the model reported below also controls for individual work and welfare history, respondent and family characteristics, and two county-level variables: the passage of time and unemployment rates. Table 4 reports these results (Appendix F provides the full model results), and figures 4 and 5 simulate the effects of child care and transportation problems on the work and welfare outcomes of a typical respondent. We discuss these simulations in detail below.

The individual barriers that we measure fall into four categories: (1) human capital deficits (education less than high school or GED, few work skills, low English proficiency, poor language skills); (2) health-related barriers (two or more physical health problems that interfere with meeting responsibilities and two or more activity limitations, and/or mental health symptoms serious enough to indicate treatment, family violence, drug or alcohol abuse); (3) family responsibilities (needs more child care, has a child needing a lot of care); and (4) transportation problems (lacks a driver’s license or access to a vehicle).<sup>24</sup> In addition to these potential barriers, we include two affirmative child care variables: having a regular source of family-supplied child care, and having a regular source of nonfamily-provided child care.

<sup>24</sup> We define these variables in Appendix B.

Table 4  
**Individual Barriers, Relative Risk Ratios**  
 (model includes 6,344 quarterly observations on 398 respondents)

	1	2	3	4	5	6	
	Welfare and part-time work	Welfare and full-time work	Employment only, part-time	Employment only, full-time	Neither work nor welfare	Welfare only	
<b>Barriers</b>							
Lacks driver's license or has no access to a car	0.58 ***	0.33 ***	0.73	0.27 ***	0.75		
Needs more child care	0.78	0.43 ***	1.48	0.41 **	1.58 **		
Child needed extra care	0.87	0.42 ***	1.16	0.75	0.57 **		
English not spoken at home and English proficiency limited	0.76	0.53	0.74	0.21 **	0.65		
Ability to read or write English limits working	1.01	0.58	0.75	0.62	0.68		
No high school diploma or GED	1.10	1.04	1.32	1.01	1.56 **	comparison outcome	
Five or fewer work skills	0.81	0.65	0.70	0.50 *	1.15		
Two or more physical health problems	0.98	0.63	0.52 **	0.64	0.86		
Two or more activity limitations	0.70 *	0.81	0.49 **	0.58	1.18		
Mental health symptoms in the past 7 days	0.89	1.35	0.62	0.73	1.16		
Partner violence or control	1.47	1.19	1.44	1.87	1.34		
Substance abuse symptoms	1.08	1.05	0.80	1.05	1.32		
Criminal justice system involvement	0.95	0.83	1.43	1.04	1.09		
<b>Child care supports</b>							
Has regular source of family child care	1.94 ***	4.13 ***	1.44	3.10 ***	0.99		
Has regular source of nonfamily child care	1.45 *	2.86 ***	0.86	1.57	0.65		
<b>Welfare and employment history – respondent</b>							
Fraction of quarters 1994–98 had EDD earnings	6.37 ***	12.77 ***	10.69 ***	10.71 ***	0.38 ***		
Fraction of quarters 1994–98 received welfare	2.64 ***	4.42 ***	0.76	0.74	0.39 ***		
<b>Respondent and family characteristics</b>							
<i>Age (Age 18–24 is the comparison category)</i>							
Age 25–34	0.64 **	0.78	0.96	0.93	1.13		
Age 35–44	0.52 ***	0.79	0.67	0.63	0.92		
Age 45 or older	0.34 ***	0.36	0.58	0.71	0.81		
<i>Nativity</i>							
Respondent foreign-born	1.08	1.02	1.59	1.63	1.11		
<i>Sex</i>							
Male	2.19 ***	2.31 *	1.12	2.76 **	1.61 *		
<i>Race (White is the comparison category)</i>							
Black	0.98	0.57 *	1.09	1.13	0.85		
Hispanic	1.15	1.40	1.28	1.50	1.10		
Other race/ethnicity	0.59 *	0.97	0.74	1.11	1.61		

continued . . .

	1	2	3	4	5	6
	Welfare and part-time work	Welfare and full-time work	Employment only, part-time	Employment only, full-time	Neither work nor welfare	Welfare only
<i>Household composition</i>						
Intimate partner in HH	1.02	0.48 ***	1.14	0.96	1.45 *	
Other adult in HH	1.22	1.00	1.63 **	0.76	1.18	
Number of children 0–2	0.86	0.96	0.61 ***	0.48 ***	0.71 ***	
Number of children 3–5	0.90	0.98	0.65 ***	0.53 ***	1.00	
Number of children 6–12	0.90	1.18	0.74 **	0.91	1.01	
Number of children 13–17	1.09	1.37	1.39 **	1.04	1.07	
<b>County-level effects</b>						
1998	comparison category					
1999	1.23 *	1.75 ***	1.20	0.95	1.22	
2000	1.47 ***	2.37 ***	1.62 **	3.21 ***	1.60 ***	
2001	1.78 ***	2.32 ***	3.36 ***	6.61 ***	3.23 ***	
Unemployment rate x100 (Stockton-Lodi MSA)	0.94 *	0.91 **	1.02	1.04	1.07 ***	

\* significant at the .10 level; \*\* significant at the .05 level; \*\*\* significant at the .01 level

Of all the barriers that we capture in the model, lack of transportation and child care are most strongly associated with the likelihood that adults will be able to work part time while still receiving CalWORKs benefits (column 1): Those who lacked access to a car were 58% as likely to combine welfare with part-time work as to rely entirely on CalWORKs. Respondents who reported having a regular source of family child care were almost twice as likely (1.94) to combine welfare and part-time work as to rely on welfare alone. Those who reported a regular source of nonfamily child care were 45% more likely to combine welfare and part-time work than to receive welfare alone, although the latter relationship is significant at the 10% level.

Similar patterns show up among respondents who worked full-time while still receiving some CalWORKs benefits (column 2): Those who lacked regular access to a car were one-third as likely to work full-time while receiving benefits as to rely entirely on CalWORKs. Those who had a regular nonfamily source of child care were almost three times (2.86) as likely to combine full-time work and welfare as to rely on cash aid alone. And those who reported a regular source of family child care were more than four times (4.13) as likely to work full-time while receiving aid as to depend entirely on cash assistance. In addition, if a respondent reported needing more child care, he or she was 43% as likely to combine full-time work with welfare as to rely on CalWORKs alone.

Next we consider those adults who were working part-time or full-time in a given quarter without receiving any CalWORKs benefits (columns 3 and 4). Adults lacking child care and transportation were just as likely to work part time as to rely entirely on CalWORKs benefits. However, those who reported two or more physical health problems or two or more activity limitations were about half as likely (52% and 49%, respectively) to work part time as to receive only CalWORKs benefits.

Transportation and child care did prove significant impediments to adults working full-time without receiving CalWORKs benefits (column 4): those reporting no car or no driver's license were 27% as likely to work full-time as to rely entirely on cash aid. Compared with those who



relied entirely on CalWORKs, those who needed more child care were 41% as likely to work full-time, and those reporting having a regular source of family child care were over three times (3.1) as likely to work full-time without receiving any cash aid. In addition, those who reported having language limitations were about one-fifth (.21) as likely to work full-time, and those who reported fewer than five job skills were 50% as likely to work full-time as to rely entirely on CalWORKs, although this last relationship is significant at the 10% level.

### ***Respondents' Work and Welfare History***

We also included two other variables associated with the outcomes we measure: recent work and welfare history. Both are continuous variables measuring the proportion of quarters or months in which each respondent had earnings or received CalWORKs benefits between January 1994 and December 1997.<sup>25</sup>

Not surprisingly, respondents who had worked prior to the implementation of CalWORKs were much more likely to combine work and welfare or work without receiving cash aid, as to rely entirely on CalWORKs: Those who worked a large proportion of the quarters between 1994 and 1997 were over 10 (10.7) times more likely to work part- or full-time (columns 3 and 4), and were as much as six (6.37) and 12 (12.77) times more likely to combine part- or full-time work and welfare (columns 1 and 2), respectively, as to rely entirely on CalWORKs. They were also less (.38 times) likely to be neither working nor receiving CalWORKs.

Compared with those who relied entirely on CalWORKs, those who reported a history of aid were more likely to combine work and welfare (columns 1 and 2), and less likely to neither work nor receive welfare (column 5), and neither more nor less likely to rely entirely on part- or full-time earnings (columns 3 and 4). These results imply that, during the period in question, and holding other factors constant, those who had a history of aid receipt prior to the start of the CalWORKs program were more likely to combine work and welfare and less likely to exit aid without working between 1998 and 2001 than to rely entirely on CalWORKs or earnings.

### ***Respondents' Family and Own Characteristics***

The number and ages of children in respondents' households were not significantly associated with their parents' probability of combining cash aid and part- or full-time work (columns 1 and 2) relative to relying on cash aid alone. But the story is different when we look at exiting CalWORKs. Respondents with children under the age of six were less likely to rely solely on part- or full-time work than they were to receive CalWORKs alone. The more children in this age group that a respondent had, the less likely he or she was to rely solely on employment (columns 3 and 4). For example, a respondent with two children aged two or younger was 8% as likely to work part-time and 7% as likely to work full-time as to rely solely on cash assistance. By contrast, someone with no children in that age group was 18% and 24% as likely to be working part- and full-time, respectively (simulation not shown).<sup>26</sup> Having one or more children between 6 and 12 years of age is negatively associated with part-time work, while having one or more children between 13 and 17 is positively associated with part-time work as compared to relying entirely on CalWORKs. Having older children is not by itself a significant predictor of combining welfare and full-time work.

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<sup>25</sup> We do not count quarters in which the respondent was less than 18 years old.

<sup>26</sup> In the simulation, we varied the number of children in the family aged two and younger leaving all other characteristics as respondents reported them (including the number and ages of other children in the household).

With one notable exception, we did not find the respondent's own age to be significantly associated with work and welfare outcomes, which differs from the findings of previous research. The exception we found is that all respondents over age 25 (25–34, 35–44, and 45 and older) were 34% to 64% less likely than 18–24-year-olds to combine part-time work and cash aid than to rely entirely on CalWORKs benefits (column 1).

Compared to women, men were far more likely to combine part-time work and cash aid (2.19, column 1), to combine full-time work and cash aid (2.31, column 2), to work full-time without CalWORKs benefits (2.76, column 4), or to neither work nor receive cash aid (1.61, column 5) than to rely on CalWORKs alone. These relationships were significant at the 10% level for combining full-time work with CalWORKs and for neither working nor receiving welfare.

After controlling for reported barriers, family characteristics, welfare and work history, and other factors, race did not generally affect work and welfare outcomes. One exception emerged: Compared to whites, blacks were 57% as likely to combine welfare and full-time work (column 2) as to rely on CalWORKs alone. However, this relationship was significant at the 10% level.

After accounting for other factors, being foreign-, not native-, born also bore no significant relationship to work and welfare outcomes.<sup>27</sup>

Reporting living with a partner (either inside or outside of marriage), or having another adult in the household generally was not associated with work and welfare outcomes. There are a few exceptions. Surprisingly, those who reported being married or living with a partner at the time of the interview were about 48% as likely to combine full-time work and cash aid (column 2) as to rely entirely on CalWORKs. Not surprisingly, they were also 45% more likely to neither work nor receive cash aid (column 5) than to rely on CalWORKs alone, although this relationship was significant at the 10% level. The presence of another adult in the household proved significant in only one instance: Respondents were 63% more likely to work part time without receiving cash aid (column 3) than to rely on CalWORKs alone.

### ***County-level Effects***

We round out this discussion by examining county-level factors that influenced patterns of work and welfare use. To capture the passage of time, we include variables indicating the year in which we measured the outcomes. These indicators pick up trends over time affecting all survey respondents apart from the economic circumstances that we include separately in the model (more on this below).

The most obvious change affecting welfare recipients in San Joaquin from 1998 to 2001, as in California as a whole, was the implementation of the CalWORKs program. We assume these year markers measure, in part, the association between the implementation of CalWORKs in San Joaquin County and patterns of work and welfare use. It is also the case that these indicator variables pick up the dissipation of the “shock” that resulted in these individuals receiving welfare in 2000. That is, at least some of the respondents would have made the transition from welfare to work even if the AFDC/GAIN program had continued uninterrupted. Welfare receipt under the

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<sup>27</sup> Notwithstanding restrictions on federal TANF cash assistance to legal immigrants who entered the US after August 1996, California law permits all legal permanent residents to receive state-funded CalWORKs benefits. Readers may also be interested in a WPRP report examining immigrants' use of cash programs in California: “California's Immigrant Households and Public-Assistance Participation in the 1990s” (Brady et al., 2002).

old program was a temporary state for most recipients. This is less true of the San Joaquin County sample that we analyze because it over-represents those with low exit rates from welfare.<sup>28</sup>

These year markers show that, compared to 1998, respondents in 2001 were far more likely to combine work and welfare, or to rely entirely on earnings, than to depend on CalWORKS benefits alone. In general, the change from 1998 to 1999 is not significant, perhaps reflecting the slow ramp-up of the program.<sup>29</sup> The change from 1998 to 2000 is significant in all cases, and by 2001 respondents were 78% more likely to combine part-time work and cash aid (column 1), 2.32 times as likely to combine full-time work and welfare (column 2), 3.36 times as likely to work part-time without receiving cash aid (column 3), and 6.61 times as likely to work full-time without receiving CalWORKs (column 4) as to rely entirely on cash assistance. Compared to 1998, in 2001, these respondents were also 3.23 times as likely to neither work nor receive welfare (column 5) as to rely on CalWORKs alone. This nearly mirrors the likelihood of working part-time without receiving cash aid (3.36, column 3).

It is worth noting that many of these respondents probably reached the end of their 24-month time limit in 2001. Some additional evidence that the CalWORKs program increased employment among this sample comes from an analysis that uses information about respondents' employment before and after the implementation of CalWORKs. The results, reported in Appendix E, imply that CalWORKs increased employment among these respondents by 20% after its implementation in 1998.

We capture the improving economy in San Joaquin from 1998 to 2001 using the countywide unemployment rate, which dropped from a high of 11.2% over the period to a low of 7.4%. Our results indicate that the economy did not significantly change the likelihood that respondents relied entirely on their part-time or full-time earnings without receiving CalWORKs benefits (columns 3 and 4). The falling unemployment rate did, however, affect the likelihood that members of this sample combined work and cash aid: A simulation that we don't show demonstrates that the likelihood of combining welfare and full-time work rose from 7% to 10% when the unemployment rate dropped from its high to its low, while the likelihood of combining welfare and part-time work rose from 17% to 20%. A falling unemployment rate was also associated with a drop in the likelihood that respondents were neither on CalWORKs nor employed (21% to 17% from high to low).

Although these relationships are significant, they are smaller in magnitude than the child care and transportation variables, and much smaller than the indicators measuring the stage of CalWORKs program implementation. In our sample, work and welfare history, the passage of time (which partly captures the implementation of CalWORKs), and potential barriers to employment were more important than the improving labor market in affecting the likelihood that respondents worked or combined work and cash aid.<sup>30</sup>

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<sup>28</sup> Previous research has also shown that demographic characteristics besides age, which we capture separately in our models, are associated with different probabilities of exiting welfare. See Boisjoly et al., 1998.

<sup>29</sup> Zellman et al., 1999.

<sup>30</sup> We note that the unemployment rate in San Joaquin County is an imperfect measure of respondents' economic opportunities in two senses: First, the overall unemployment rate does not track precisely the jobs available to low-income workers. Second, some respondents worked or moved out of the county during the time period of our analysis (perhaps because economic opportunities in the county were relatively poor).

To conclude, the two models give different insights into the problems that barriers may pose for recipients. The first model addresses whether reporting more barriers was associated with a reduced likelihood of working, and perhaps working full-time, while the second model teases out which individual barriers were most associated with a reduced likelihood of working.

In the model that counts up the number of potential barriers reported by respondents, we found a strong pattern: Greater numbers of barriers were associated with greater reliance on welfare. Those who reported three or more barriers were significantly more likely to remain unemployed and receive CalWORKs benefits than to work or combine work and welfare. Experiencing even a few barriers reduced the likelihood of working the number of hours required by the CalWORKs program compared to receiving welfare alone. However, the same number of barriers did not affect the probability of working fewer than the required number of hours.

In the model that distinguishes among individual barriers, summarized in Table 5, we find that the barriers most often associated with the likelihood of working or combining welfare and work are transportation and child care. This is consistent with other research that examines the likelihood that welfare recipients work. In our model, those who reported having no car or driver's license, or who reported needing more child care, were significantly less likely to work full time than to rely on cash aid alone.

Physical and mental health problems, alcohol or drug abuse, domestic violence, or limited education were not strongly associated with working or combining work and welfare in our sample. English-language limitations and few work skills are not associated with all outcomes, but they are associated with lower odds of working full time relative to relying entirely on CalWORKs benefits. This differs somewhat from previous research discussed in earlier in this report, which finds that both health problems and few work skills are associated with a lower probability of working. We note here that family violence and drug or alcohol abuse are very likely underreported. In addition, mental health problems may be both underreported and transient. Consequently, these potential barriers are not measured as accurately as variables like language proficiency, child care, and access to a car, making it more difficult to detect relationships that may exist between these potential barriers and work and welfare outcomes.

Reporting potential barriers, especially lacking access to a car or needing more child care, altered the likelihood that respondents would work or combine work and welfare. However, the strongest individual correlations with work and welfare outcomes we found were not with reported barriers, but with two other variables: an individual's work history (which we consider a personal characteristic), and the year markers (which capture both the stage of CalWORKs implementation and the passage of time).

In Appendix F we include for reference models that replicate those we discussed in this section, except that they use observations from *only* the quarters in which the respondents were interviewed. The models in the appendix are, therefore, the most conservative use of the data available to us. It is noteworthy that the results from both versions of the model are quite similar. In particular, the greater the number of barriers that a respondent reported, the less likely he or she was to combine work and welfare or to work without receiving welfare, compared to receiving cash aid alone. Problems with transportation or with child care were also negatively associated with working or combining welfare with work, compared to receiving CalWORKs alone.

Table 5  
**Relationship of Barriers to Welfare and Work Outcomes**<sup>1,2</sup>

	Welfare and <32 weekly hours of employment	Welfare and 32+ weekly hours of employment	Employment only, <32 weekly hours	Employment only, 32+ weekly hours	Neither work nor welfare
<b>Barriers</b>					
Lacks driver's license or has no access to a car	-	-	0	-	0
Needs more child care	0	-	0	-	+
Child needed extra care	0	-	0	0	-
English not spoken at home and English proficiency limited	0	0	0	-	0
Ability to read or write English limits working	0	0	0	0	0
No high school diploma or GED	0	0	0	0	+
5 or fewer work skills	0	0	0	0	0
2 or more physical health problems	0	0	-	0	0
2 or more activity limitations	0	0	-	0	0
Mental health symptoms in the past 7 days	0	0	0	0	0
Partner violence or control	0	0	0	0	0
Substance abuse symptoms	0	0	0	0	0
Criminal justice system involvement	0	0	0	0	0

<sup>1</sup> Receiving welfare alone is the comparison outcome.

<sup>2</sup> + Indicates a positive relationship and - indicates a negative relationship, significant at the 5% level. 0 indicates that the relationship did not reach statistical significance at the 5% level.

### ***Simulations***

We can use the results of our main models to simulate work and welfare outcomes for combinations of barriers that are of particular interest.<sup>31</sup> In this section we simulate removing child care and transportation barriers and examine the likely effects for each of the work and welfare outcomes we have modeled. In our model, these are the two individual barriers most consistently associated with a lower probability of working compared to relying entirely on CalWORKs benefits. We also simulate the effects of an increasing number of barriers on work and welfare outcomes, holding other variables constant.

In order to establish baseline outcome probabilities, we identify a hypothetical recipient who is typical of single-parent recipients in San Joaquin County: an Hispanic woman between 25 and 34 years of age with one child between three and five years of age who is observed in 2001. In addition, we assign to this hypothetical recipient the sample average work and welfare history and assume that she is not foreign-born, did not report poor English skills in the survey, had no partner or other adult in the household, and no barriers other than needing more child care and lack-

<sup>31</sup> Long (1997) discusses strategies for using simulation to interpret the results of nonlinear models.

ing access to a car.<sup>32</sup> Finally, we set the unemployment rate to its mean level (9.1%) over the period in San Joaquin County.

Figure 3 reports outcomes for this hypothetical recipient while varying the number of reported barriers from zero to five. We assume for purposes of this simulation that she had a regular source of family child care and no regular source of nonfamily care. Figure 4 displays the results for the analysis of child care, and Figure 5 charts the differences for transportation. In the simulations reported in Figure 4, we assume that this hypothetical recipient reported no transportation difficulties, and in Figure 5, we assume that this recipient had a regular source of family child care, no regular source of nonfamily child care, and did not report needing more child care.

In Figure 3, from left to right, we simulate how the probability of working and/or receiving CalWORKs benefits changes as we reduce the number of barriers our hypothetical recipient reports. The probability of relying entirely on CalWORKs benefits drops from 26% to 10% as the number of reported barriers declines from five or more to zero. The probability of working full time in combination with CalWORKs triples (from 5% to 15%), and the probability of working full time without receiving cash aid grows more than fivefold (from 7% to 39%). Part-time work, either alone or in combination with CalWORKs changes very little. However, the probability of neither working nor receiving CalWORKs declines from 33% to 12%.

Figure 4 simulates decreasing difficulties with child care. The left-most bar simulates the probability that this recipient would have worked and/or received CalWORKs benefits if she reported no regular source of family or nonfamily child care and said she needed more child care. The right-most bar simulates the outcomes if she reported both a regular source of family and nonfamily care, and did not need more child care. The hypothetical recipient reporting sufficient child care is over five times more likely to work full time either alone or in combination with CalWORKs (67%), than the hypothetical recipient reporting neither family nor nonfamily child care (13%). At the same time, the recipient reporting sufficient child care is only one-third as likely to rely entirely on CalWORKs benefits (8%) as the recipient reporting neither family nor nonfamily sources of child care (25%). Finally, the recipient reporting sufficient child care is nearly one-eighth as likely to neither work nor receive CalWORKs benefits (4%) as the recipient reporting no sources of child care (31%).

Figure 5 simulates the probabilities of working or combining work and welfare for the same hypothetical recipient while varying her access to a car and driver's license. In this scenario, the recipient who reports access to a car and driver's license is half as likely to rely on CalWORKs benefits alone (12%) as the recipient without access to a car and license (25%). The recipient with access to a car is nearly 77% more likely to work full time, either alone or in combination with CalWORKs (53%) than the recipient lacking access to a car and license (30%). And the recipient reporting access to a car is 50% less likely to neither work nor receive CalWORKs benefits (10%) than her counterpart who reports no access to a car and license (15%).

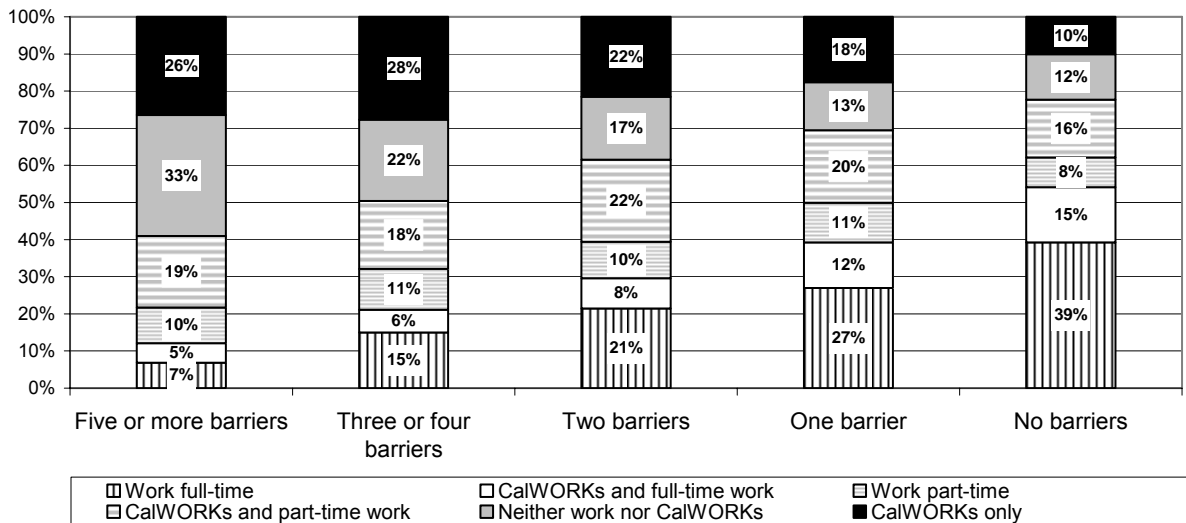
In summary, for this hypothetical but typical San Joaquin County single recipient, removing barriers in general, and child care and transportation barriers in particular, increases the probability that she can work full time and decreases the probability that she will rely entirely on CalWORKs benefits. Removing barriers is also associated with a reduction in the probability that

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<sup>32</sup> That is, no reported alcohol or drug abuse, physical or mental health problems, domestic violence, child needing special care, few work skills, language obstacles to working, and lack of a high school diploma or GED.

she neither works nor receives cash aid. Even so, in the best of circumstances, this hypothetical respondent has a 20–24% chance of working fewer than 32 hours per week, either alone or in combination with CalWORKs, and an 8-12% probability of depending entirely on CalWORKs benefits.

Figure 3  
**Simulated Work and Welfare Status for a Typical Recipient,  
 While Changing Number of Barriers<sup>33</sup>**



<sup>33</sup> In creating this simulation, we assumed that the respondent was an Hispanic woman between 25 and 34 years of age with one child between three and five years of age who is observed in 2001. In addition, we assigned her the sample average work and welfare history and assumed that she is not foreign-born, did not report poor English skills in the survey, had no partner or other adult in the household, and no barriers other than lack of child care.

Figure 4  
**Predicted Work and Welfare Status for a Typical Recipient  
 Under Simulated Child Care Arrangements**<sup>34</sup>

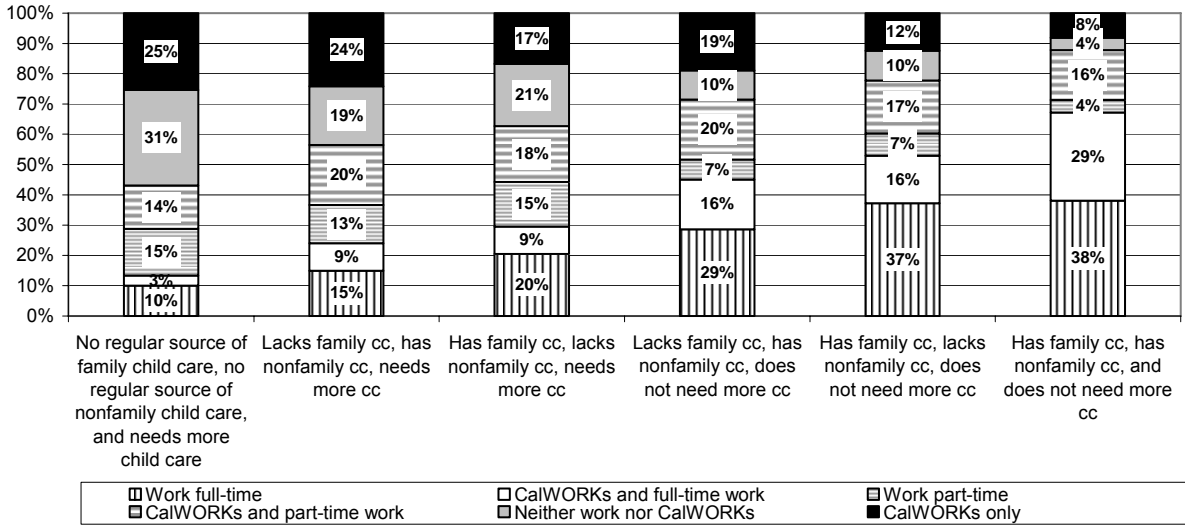
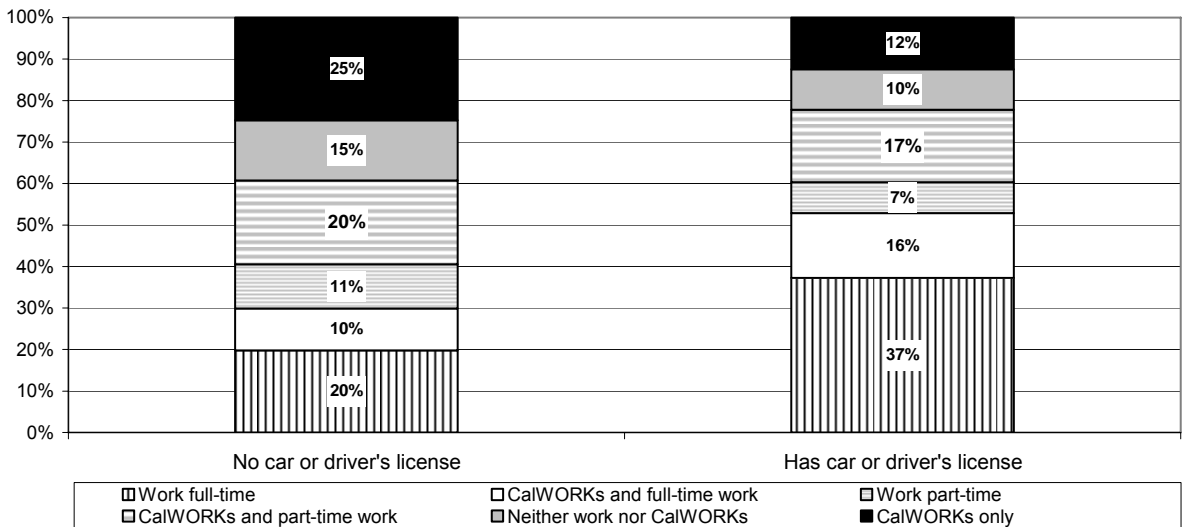


Figure 5  
**Simulated Work and Welfare Status for a Typical Recipient,  
 While Changing Access to Transportation**<sup>35</sup>



<sup>34</sup> In creating this simulation, we assumed that the respondent was an Hispanic woman between 25 and 34 years of age with one child between three and five years of age who is observed in 2001. In addition, we assigned her the sample average work and welfare history and assumed that she is not foreign-born, did not report poor English skills in the survey, had no partner or other adult in the household, and no barriers other than lack of a car and/or driver's license.

<sup>35</sup> In creating this simulation, we assumed that the respondent was an Hispanic woman between 25 and 34 years of age with one child between three and five years of age who is observed in 2001. In addition, we assigned her the sample average work and welfare history and assumed that she is not foreign-born, did not report poor English skills in the survey, and had no partner or other adult in the household.



## 5. CONCLUSION

This study collected rich information about a sizable sample of poor, single parents in San Joaquin County who were receiving CalWORKs cash assistance in the spring of 2000 and who were subject to program work requirements. We surveyed these CalWORKs recipients twice, interviewing them about many aspects of their lives, including factors that might impede or support employment. These factors related to household composition, physical and mental health, substance abuse, special needs of household members, their need for and sources of child care, and their access to a car. In the analyses we include in this report, we matched these survey data with state administrative data on these recipients' earnings and use of CalWORKs benefits.

Our analysis shows that during the period we reviewed, the fraction of single-parent respondents who were unemployed and receiving cash aid declined from 44% to 24%. The proportion of those combining work and cash aid declined from 32% to 20%, while the proportion working and not receiving cash aid increased from 9% to 25%. However, at the same time, the proportion of those neither working nor receiving cash aid doubled from 15% to 31%.

Analysis of the survey data shows that experiencing at least one potential barrier to employment was quite common among our sample. At the same time, the prevalence of barriers declined between 2000 and 2001, and many barriers did not persist over this time period. There were important exceptions. Several barriers, including having few work skills, limited education, limited English proficiency, and lacking a car or driver's license, did not decline in prevalence and persisted for individual respondents between both waves of the survey.

Our multivariate analysis reveals two barriers that most consistently affected respondents' ability to work: lacking access to a car and insufficient child care. During the time period we analyzed, problems in these areas are consistently associated with a reduced likelihood of working, alone or in combination with welfare, compared to the likelihood of relying entirely on CalWORKs benefits.<sup>36</sup> This finding is consistent with previous research in this area. Recipients reporting these problems found it harder to work full time than to work part time. In addition, survey respondents who reported language limitations and few work skills were less likely to work full time than to rely on cash aid. Finally, respondents who reported multiple barriers were far less likely to work full time, alone or in combination with welfare.

These findings strongly imply that welfare recipients who experience multiple barriers may not be able to sustain employment at the levels required by the CalWORKs program. In this period of a robust economy, insufficient child care and transportation had persistent effects on employment and welfare outcomes for this group of survey respondents as a whole, even though child care problems did not persist over the entire time period for many respondents.

Finally, we also simulated the effects of reducing from five or more to zero the number of barriers reported by the typical single-parent CalWORKs recipient in San Joaquin County. In this simulation, the probability of working full time, either alone or in combination with CalWORKs, rose from 12% to 54%. Similarly, removing child care difficulties for this typical recipient increased the probability of working full time from 13% to 67%, and removing transportation dif-

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<sup>36</sup> See Blumenberg, et al. (2003) and Ong (2002) for further analysis of transportation problems of California welfare recipients and the association of transportation problems with gaining access to CalWORKs services and with working.

difficulties raised the probability of working full time from 30% to 53%. Still, our models imply that the probability that this typical recipient could work full time without receiving CalWORKs in 2001, even if she reported no barriers, was only 39%.

These results must be interpreted cautiously for three reasons. First, this sample, like any cohort sample of welfare recipients, is not truly representative of the state's welfare population at the current time. Second, it is possible that our analyses failed to incorporate other factors (other potential barriers to employment or resources that aid employment) that could affect respondents' earnings and reliance on CalWORKs. Finally, some respondents may perceive a situation they face as a barrier (for instance, lack of child care) because they desire to work (or to increase their hours of work), while others do not report the same situation as a barrier because they are not seeking employment. In our analyses we cannot account for respondents' varying perceptions of barriers. Still, this study's findings are consistent with recent research on barriers to employment conducted elsewhere in California and the U.S.

### **Program and Policy Implications**

Inadequate child care and transportation limited full-time work among our sample of single-parent CalWORKs recipients in San Joaquin County more consistently than other reported barriers. Our analysis suggests that providing more help with transportation and child care will increase full-time work among welfare recipients and recent welfare leavers in counties like San Joaquin. Of the two, transportation difficulties were more prevalent and persistent for our sample.

Although the state faces severe budget problems, policymakers should strive to maintain both subsidies at current levels. When revenues permit, they should consider providing more generous transportation subsidies and increasing the rate at which eligible households avail themselves of child care subsidies. Ideally, both child care and transportation subsidies should remain available to former recipients who are working for low wages and lack other sources of income.

Our analysis also suggests that experiencing even one barrier substantially reduces welfare recipients' ability to fulfill the 32-hour-per-week work requirement. Experiencing three or more barriers reduces their likelihood of working even part-time.

These findings support early screening and assessment of the numbers and kinds of barriers affecting CalWORKs recipients, followed by quick referral to appropriate services. Providing access to better-targeted services should help low-income parents subject to time limits and make better use of scarce program resources.



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## Appendix A

### SURVEY SAMPLE

Baseline interviews of 492 adult recipients of welfare cash assistance in San Joaquin County were conducted between April and September 2000. Individuals interviewed at Baseline met the following inclusion criteria: (1) active cash welfare benefits case on March 15, 2000, (2) 18–59 years of age, (3) primary language English, Spanish, Vietnamese, or Cambodian (over 90% of the welfare cases in San Joaquin County speak one of these languages), and (4) parent or caregiver in a one- or two-parent family. In order to limit the study to individuals likely to be subject to welfare-to-work requirements, the study excluded non-needy caretakers, individuals with a permanent disability, and others who met CalWORKs welfare-to-work exemption criteria.

A total of 12,418 people met selection requirements when the sample frame of 563 CalWORKs recipients was randomly drawn. The baseline study sample of 492 interviewed respondents therefore represents an initial response rate of 87%. Comparisons of the eligible county welfare population, the sample frame, and the baseline interviewed sample on age, gender, ethnicity, and language from county administrative records showed only minor differences (see NDMS 2002). On most comparable variables, the interviewed sample was within 1% - 2% of the eligible population. The Vietnamese segment was slightly over-sampled at baseline, resulting in a sample proportion 3.4% higher than the eligible population. Correspondingly, the language of record differed—with Vietnamese language 2.9% higher in the sample than the population, and English 2.7% lower. The sample also diverged from the population in the distribution of age such that the sample contained 5.1% more respondents aged 18 to 24 years, and 2.5% fewer aged 25 to 44 years.

Follow-up interviews with a subsample of 281 of the original 492 respondents interviewed at baseline were sought between April and September 2001, roughly 12 months after each individual's baseline interview. The follow-up rate for the 242 interview obtained was 86%. NDMS (2002) and NSD (2002) provide detailed discussions of non-response in both Wave 1 and Wave 2 of the survey. Table A-1 describes the demographic characteristics of the sample used in the analyses contained in this report.

The survey data were collected for the Public Health Institute by a survey research firm specializing in interviewing poor, disadvantaged, and/or difficult to locate individuals. Interviews were conducted face-to-face by trained interviewers in English, Spanish, Vietnamese, or Cambodian in a private place, most often in the respondent's home. Interviews were voluntary, completely confidential, and lasted about 1.5 to 2 hours. Several interviewers participated in both waves of data collection and developed strong positive rapport with the respondents.

The survey instrument covers the following topics: (1) demographics, education, county residency, and language, (2) housing and household composition, resources, and relationships, (3) childhood and youth, (4) work, income, welfare history, and welfare activities, (5) hunger and other hardships, (6) need for child care, transportation, health, and other services, and reports of services received, and (7) personal status in key barrier and risk factor areas, including alcohol, tobacco, and other drug use, mental health, family violence, Child Protective Services (CPS) involvement, criminality, and physical health. A series of questions asks about the status of a focal

Table A-1  
**Demographic Characteristics of Single-Parent Respondents at the Wave 1 Interview**

<b>Gender</b>		<b>Race/ethnicity</b>	
Female	90.3%	White	31.1%
Male	9.7%	Black	19.6%
<b>Age</b>		Hispanic	32.3%
18 to 24	28.3%	English language at home	23.8%
25 to 34	36.1%	Spanish language at home	8.5%
35 to 44	25.7%	Vietnamese	5.7%
45 to 54	8.3%	Cambodian	5.9%
55 to 59	1.7%	Other	5.4%
<b>Average (years) ***</b>	31.6	<b>Structure of household</b>	
<b>Birthplace</b>		Solo adult	39.2%
California	67.7%	With respondent's parent/s	19.3%
Other U.S.	13.2%	With adult relative/s	10.6%
Mexico	6.6%	With unrelated adult/s	3.3%
Vietnam	5.7%	Couples	27.6%
Cambodia	5.9%	Cohabiting	13.2%
Other region	0.9%	Married	14.4%
<b>Citizenship</b>		<b>Education</b>	
U.S. native	80.9%	Elementary or less	11.1%
Naturalized	6.4%	Jr. High, HS, not grad.	32.5%
Noncitizen	12.7%	HS graduate, GED	39.8%
		Any college	16.6%
N = 424			

child on the case, chosen at random. The survey questionnaire instrument consists 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).

### **Sample Weights**

We used sample weights in calculating barrier prevalence; however, the multivariate analysis is unweighted.

Selecting all respondents with non-English language of record (Vietnamese, Cambodian, and Spanish) for re-interview maintained numbers in those groups which may be sufficient to support comparisons across language groups. However, the selection strategy also introduced sufficient distortion in the sample compared to the eligible population sample frame that simple comparisons of the Wave 1 and Wave 2 samples seem potentially misleading. The PHI research team discussed Wave 1-Wave 2 sample differences with data analysts for San Joaquin County, and considered alternative methods for dealing with the differences. One solution would have been to ignore the distortion from the sample frame, and do Wave 1-Wave 2 comparisons only for per-

sons interviewed twice. This solution would not allow meaningful comparisons of Wave 2 prevalence estimates with Wave 1 estimates based on the whole sample.

It became clear that weighting one or both of the samples would be necessary to permit Wave 1-Wave 2 comparisons of the *samples*, as opposed to the *individuals* interviewed both times. Weighting requires a *standard* distribution of traits to which the trait distribution in the sample of interest is adjusted mathematically. The baseline sample was selected from the sample frame using only two traits—language and ethnicity of record in San Joaquin County administrative data—after excluding welfare recipients on a number of criteria. The single most defensible standard for weighting was the distribution of those two traits in the sample frame, which was the entire population eligible for selection into the study on March 15, 2002. Simple weights were constructed separately for the Wave 1 (baseline) sample and for the Wave 2 sample, which adjust the two samples to the language and ethnicity distribution of the sample frame.

Weighting the two samples permits valid statistical comparisons of the entirety of Wave 1 to the entirety of Wave 2, in addition to comparing across time persons interviewed both times. However, the weights adjust the samples to match the *eligible* population on only two variables, at only one point in time. The weights do not adjust the samples to the entire CalWORKs population of San Joaquin County in March 2000, because the study design excluded persons who did not have work requirements at that time, and those with other than the targeted ethnicity and language.

The welfare population also fluctuates from month to month. The single most important regular change over time is probably waxing and waning of welfare rolls as seasonal agricultural laborers go to work in the summer and lose jobs in the winter months. Since this study sample was drawn on March 15, at the beginning of the planting season in California's Central Valley, there may have been a somewhat lower proportion of agricultural workers in the sample than would have been the case in the winter months. It may be desirable to control for time of year when examining the proportion of the sample engaged in work by considering the month or season in which they were interviewed.

The two marginally significant differences between the weighted samples may indicate a need to control for these variables, race/ethnicity and education, in relevant multivariate analyses. Importantly, there were no significant differences between participants and non-participants on the prevalence of health-related, human capital, and family responsibility barriers, or on work or welfare outcomes at baseline.

See NSD (2002), Section 1 for a detailed discussion of the purpose and calculation of weights, including the computer code used to generate the weights.

Table B-1  
**Definitions of Potential Barriers Used in the Multivariate Models**

<b>Potential Barrier</b>	<b>Description</b>
<i>Health-related</i>	
Physical health — 2	Two or more of 21 physical health conditions interfered with respondent's ability to work, train, or look for work in the past year.
Activity limitation	Respondent is 'limited a lot' by health in 2 or more of 10 activities such as lifting or carrying groceries or walking several blocks (from SF-36).
Mental health symptoms	Number and severity of 52 psychological symptoms in the past seven days indicates need for treatment.
Partner violence or control	Experienced 1 or more of 6 acts of physical violence by a spouse/partner in the past year (i.e., choked, hit, target of thrown object), OR current spouse/partner or other parent of child impeded ability to work by harassing or controlling behavior.
Substance abuse	Experienced 3 or more of 9 alcohol-dependence symptoms in the past year (i.e., drunk when needed to be sober, memory loss, intoxicated days as a time), OR used drugs illegally 3+ times per week in the past year, i.e., more than weekends.
<i>Human Capital</i>	
Few work skills Limited education Limited English skills  Language ability limits working  Criminal justice system	Has fewer than 5 of 28 (Wave 1) or 32 (Wave 2) work skills. At time of interview had no high school diploma or GED. Among respondents who speak a non-English language at home, speaks, reads, or writes English "not well" or "not at all" (contrasted with "somewhat" or "very well"). Ability to read or write interferes with ability to find or keep a job (all respondents). At any time in the past 90 days, involved with the criminal justice system—in jail or prison, on bail, probation, work release or parole, or awaiting charges, trial or sentencing; or arrested in past year.
<i>Family Responsibilities</i>	
Needs more child care  Child required a lot of care	Needs but has not found child care (or sitters) during evenings, nights, or weekends in order to go to work, school or training; OR does not have child care for all children and/or at all times needed. Needs more child care in order to go to work, school, training. One or more children required a lot of care from the respondent for a physical, medical, or emotional problem in the past year.
<i>Logistic</i>	
No car or license	No car available for use, or does not have a valid driver's license; OR does not own a car.

## Appendix B

### BARRIER DEFINITIONS

Below we define a set of barriers covering the range of domains in the survey instrument, which permit comparisons with other research wherever possible, and which we use to assess the relative importance of potential barriers to working. Table B-1 (on the facing page) summarizes the barriers we use in our analysis. NDMS (2002) and NSD (2002) define additional barriers and examine their prevalence, persistence, and bivariate relationships to welfare use and to employment.

#### HEALTH-RELATED BARRIERS

##### **Physical Health**

Respondents were asked whether they had trouble with any of 21 different health conditions in the past year. If yes, they were asked if the condition interfered with work responsibilities, job training, or other CalWORKs commitments.

##### *Two or More Physical Health Problems*

Respondents who identified two or more physical health conditions interfering with work or training responsibilities were classified as having this barrier.

##### *Two or More Activity Limitations*

The PHI CalWORKs study questionnaires included a set of questions about activity limitations derived from the SF-36, a comprehensive health assessment questionnaire used in many medical and survey contexts (Ware and Sherbourne, 1992). The questions cover ten types of common daily activities ranging in difficulty from vigorous to moderately strenuous activities like running or lifting and carrying groceries, to “easy” activities like walking one block or bathing and dressing oneself. For each of the ten items, the respondent is asked “How much does your health limit you [in performing these tasks], a lot, a little, or not at all?” The scoring method used in this report tallies a barrier for respondents who reported being limited “a lot” in any two or more of the ten types of activities.

##### **Mental Health**

##### *Mental Health Symptoms in the Past Seven Days*

The mental health barrier variable in these models is based on a listing of 52 symptoms of mental illness or psychological distress, which the respondent may have experienced in the past seven days: “Not at all,” “A little bit,” “Moderately,” “Quite a bit,” or “Extremely.” Other mental health variables were defined in earlier reports from this study.

##### *Partner Violence or Control*

We use a modified version of the Conflict Tactics Scale (CTS), a well-known and widely used measure of domestic violence (Straus, 1990), to assess the prevalence of physical abuse by a partner. Respondents who reported being the victim of at least one of six acts of physical violence by their partner in the past year were defined as having this potential barrier. The six acts of violence are: getting a sprain, bruise or cut, being choked, being hit with an object, being hurt

enough to have to go to a doctor, being forced to have sex, and being threatened with a gun or knife.

In addition, we defined partner control to be a “yes” answer to one or more of six statements describing the behavior of the respondent’s partner or ex-partner that make it difficult to find or keep a job (e.g., discouraging attempts to find or keep a job, going back on promises to help with child care or transportation, or harassing the respondent at work). Questions at both interviews inquired about controlling behaviors in the past 12 months.

### ***Substance Abuse***

We have followed DSM-IV criteria in defining potential alcohol and drug barriers in terms of abuse and dependence symptoms (previous reports on the San Joaquin sample used on a measure of the frequency of consumption). In the DSM-IV, dependence symptoms such as blackouts, morning drinking or drug use to prevent or treat withdrawal symptoms, and getting drunk or high when there is an important reason to stay sober, are scored in seven categories. Respondents are scored at the following three levels: “addiction” (physiological dependence), “dependence” (reporting any three symptom categories), or “abuse” (one symptom category). The least stringent scoring criterion, abuse, is likely to indicate compromised role performance; that is, the kind of behaviors that adversely affect one’s ability to carry out everyday responsibilities such as finding and keeping a job.

The binary barrier measure included in the models is scored 1 if the respondent met criteria for either alcohol or drug abuse. Very small numbers of respondents were affected by alcohol or drug problems using the more severe criteria of dependence or physiological dependence.

## **HUMAN CAPITAL BARRIERS**

### **Five or Fewer Work Skills**

At both waves, respondents were asked whether they had experience or training in a number of different work skills. Examples are typing, working with a computer, bookkeeping, driving a truck, working in different trades (e.g., auto mechanic, construction, electrical, plumbing), providing child care, haircutting, personal care, and sales. At baseline, respondents were asked about 28 different work skills (including an “other” category). Based on the baseline results, the Wave 2 questionnaire was expanded to 32 items, adding the following four items: warehouse work (including loading and unloading), counseling or working with needy people, security guard work, and janitorial or housecleaning work. “Other” responses from the baseline interviews were coded into these additional categories, where appropriate, for the current analyses.

We define a work skills barrier as having fewer than five work skills of a possible 32 at the time of interview.

### **No High School Diploma or GED**

We define limited education as lacking a high school diploma or a GED.

### **Language Limitations**

We defined two types of language limitations. One focuses on English language skills (reading, writing and speaking), and thus identifies a potential barrier to work that might be seen among

immigrant respondents. The second language barrier measure focuses on more general employment-related language skills applying to all respondents.

### ***English Not Spoken at Home and Limited English Proficiency***

At both waves, respondents who spoke a language other than English at home (i.e., English was not their first language) were asked to rate separately how well or how comfortably they read, write, and speak English according to a four-point scale: not at all, not too well, somewhat, or very well. Respondents who answered any one of the three questions with “not too well” or “not at all” were classified as having a potential language barrier.

### ***Ability to Read or Write English Limits Working***

Since even native English speakers may have weak language skills, the questionnaires asked the question of all respondents “Has your ability to read or write (English) ever interfered with your ability to find or keep a job?” Those responding in the affirmative were also classified as having a potential language barrier.

### **Criminal Justice System Involvement**

The criminal justice involvement measure used in this report was created by tallying having been arrested at least once in the past 12 months, or being in jail or prison, on bail, probation, work release or parole, or awaiting charges, trial or sentencing at any time in the past 90 days.

### **Family Responsibility Barriers**

#### ***Needs More Child Care***

In this study *child care* refers only to that needed to permit the respondent to participate in work, training, school or CalWORKs welfare-to-work plan activities. In both waves, respondents were asked if they “have child care for all the children who need it” (in order to go to work, school, or training), with possible responses of “all of the time, only some of the time, or none of the time.” Those who answered “some” or “none of the time” were asked, “Which times do you not have child care [for]?”, with possible responses including “weekdays, before school, after school, evenings, and/or weekends.” Respondents who reported needing child care for any of those times were defined as needing “more” child care.

#### ***Child Needed Extra Care***

Respondents were asked at both waves whether any of their children, of any age, required a lot of care from the respondent for a physical, medical, or emotional problem in the past year.

### **Logistic Barriers**

#### ***Lacks Driver’s License or Has No Access to a Car***

Consistent with other studies, we define the transportation barrier to be lacking a driver’s license and/or lacking access to a car.





## **Appendix C**

### **ADMINISTRATIVE DATA**

In the multinomial logit models, we use data on employment and welfare use. The employment data are drawn from the Unemployment Insurance Base Wage Files (UIBWF) provided by the California Employment Development Department. The UIBWF data are available quarterly and record the earnings of those with covered employment. The welfare data are drawn from the Medi-Cal Eligibility Determination System (MEDS), which is a statewide record of those receiving Medi-Cal (California's Medicaid program) maintained by the California Department of Social Services and Department of Health Services. Since everyone who receives welfare (AFDC, now CalWORKs, cash assistance) is categorically eligible for Medi-Cal, and the database records the overlap, the MEDS provides an accurate monthly record of welfare receipt.



## Appendix D

### SURVEY AND ADMINISTRATIVE DATA MATCHES

Table D1  
**Percent Agreement Between the Unemployment Insurance Base Wage File (UIBWF) and Survey Reports of Earned Income**

<b>Survey-reported earnings (past 30 days)</b>				
	Wave 1 Survey (N=489)		Wave 2 Survey (N=239)	
	0 earnings	+ earnings	0 earnings	+ earnings
<b>EDD covered wages, previous quarter</b>				
0 earnings/no record	81% (238)	19% (55)	66% (82)	34% (43)
+ earnings	26% (51)	74% (145)	20% (23)	80% (91)

The shaded cells in Table D-1 above highlight the percentage of survey respondents whose reports of earnings in the 30 days prior to the survey match the California Employment Development Departments (EDD) records of earnings among those covered by the Unemployment Insurance (UI) program. Cells that are not shaded indicate disagreement. The match is not perfect because EDD collects earnings information on a quarterly basis, while the survey asks about the month prior to the survey. This mismatch implies that there are some valid self-reports of no earnings in the past month, although EDD recorded earnings in the past quarter. That is, given the nature of our data, survey respondents will appear to underreport earnings more than is truly the case, and the shaded cells in the last row of the table will report more disagreement than is in fact the case.

Focusing, then, on the top row of the table (those for whom EDD had no record of earnings), we see that the majority of self-reports are in accordance with administrative reports of earnings. The level of agreement drops sharply between the waves of the survey. Assuming that the propensity to accurately report earnings did not change between 2000 and 2001, this change may indicate that current and recent welfare recipients are increasingly finding jobs in sectors not covered by the UI program. In particular, remember that self-employed persons and most independent contractors are not included in the EDD database.<sup>37</sup>

The second row of the table shows that the level of agreement increased somewhat between the survey waves for those who had positive earnings in the EDD database. This change may indicate that current and recent welfare recipients in San Joaquin also increased their level of steady work between the two waves of the survey.

<sup>37</sup> See Hotz and Scholz (2000) for details of the coverage of the UI wage database and a discussion of the coverage of low-income workers in particular.

Table D2  
**Percent Agreement Between the Medi-Cal Eligibility Determination System (MEDS) and  
Survey Reports of CalWORKs Receipt**

Received a welfare check in the past 30 days for self or child				
	Wave 1 Survey (N=489)		Wave 2 Survey (N=239)	
<b>MEDS</b>	NO	YES	NO	YES
On aid, single parent assistance unit (AF)	6% (18)	94% (264)	4% (4)	96% (106)
On aid, two parent assistance unit (2P)	10% (4)	90% (35)	15% (2)	85% (11)
Off aid, no Medi-Cal	61% (19)	39% (12)	97% (35)	3% (1)
Off aid, receiving Medi-Cal	65% (11)	35% (6)	60% (3)	40% (2)
Sanctioned or Medi-Cal leaver	14% (16)	86% (98)	46% (31)	54% (37)
SSI/SSP	0% (0)	100% (6)	40% (2)	60% (3)
Child-only (ZP)	-	-	0% (0)	100% (2)

Table D-2 above shows the level of agreement about welfare use among survey respondents, again comparing survey and administrative data sources. The reports do not match exactly because the survey asked whether the respondent or her child had received a welfare check in the past 30 days, while the Medi-Cal Eligibility Determination System (MEDS) indicates only the respondent's aid code for the month.

Focusing for this reason on the top four rows of the table, and looking at the shaded cells indicating agreement, we see that those who were aided according to MEDS were very likely to have reported that they received a check in the past month. The level of agreement drops off sharply for those who did not have a cash assistance code in MEDS in the interview month (the third and fourth rows of the table). For those who were neither receiving CalWORKs nor transitional Medi-Cal, the level of agreement jumps to nearly 100% at the second wave of the survey. Again assuming that the propensity to report accurately did not change over time, possibly respondents in the first wave were closer to their last spell of aid receipt than at the second wave (because the gap between collecting contact information for the sample and actually interviewing them was shorter than the gap between the first and second survey waves) and were therefore more likely to believe that they had very recently received a welfare check.

The last three rows of the table are more difficult to interpret. San Joaquin County indicated that some MEDS aid codes were used to indicate either that a recipient was in sanction status or that the entire assistance unit had left aid and was receiving transitional Medi-Cal. If an adult is sanctioned in California, children continue to receive a reduced CalWORKs check. Likewise, if an adult qualifies for SSI, children likely continue to remain eligible for aid (as child-only, or zero parent, cases). The survey asked whether the respondent received a check for herself or her children, but the administrative aid codes for respondents do not allow us to distinguish between those who received a check only for their children. The last row may be a MEDS coding error, given the definition of the survey sample.

Taken as a whole, the table indicates that survey and administrative data are in agreement a majority of the time. It appears, however, that those who are not receiving a welfare check according to administrative data quite often believe that they have recently received a check, which we attribute in part to monies received for children while respondents were in sanction status, and perhaps also to the compression of past events found among survey respondents more generally.



## Appendix E

### ANALYSIS OF THE CalWORKs PROGRAM CONTRIBUTION TO EMPLOYMENT

In order to provide more insight into the trends in employment among the survey respondents before and after CalWORKs was implemented, we model the total number of respondents who had EDD earnings in a quarter as a function of the year and quarter of the observation and the total retail and farm employment in the quarter. We include an indicator for whether the CalWORKs program had been implemented.

We see, first of all, that increases in retail and farm employment are associated with significant increases in the number of survey respondents with earnings. Recall that the economy in San Joaquin County improved continuously throughout most of this period.

Strikingly, the coefficient estimate for the marker of CalWORKs implementation shows an increase in employment of 20% among respondents during the time period after the implementation of CalWORKs. This is above and beyond the strong time trend. This result provides additional evidence that the bundle of policy changes implemented beginning in 1998 increased employment among those who were on CalWORKs during its early implementation phase in San Joaquin County.

Table E-1  
**Multivariate Analysis of Pre-/Post-CalWORKs Employment Outcomes**<sup>1,2</sup>

<b>Dependent variable:</b> Log of total respondents with EDD-reported earnings in the quarter	<b>Parameter estimates</b>
Year	0.056 (0.021)
Quarter 2	-0.182 (0.093)
Quarter 3	-0.062 (0.093)
Quarter 4	0.058 (0.061)
CalWORKs implementation began (January 1998)	0.198 (0.048)
Total retail employment	0.000043 (0.000020)
Total farm employment	0.000027 (0.000010)
Constant	-107.80 (40.70)
Observations	34.0
R-squared	0.97

<sup>1</sup> Observations are quarterly from 1994 Q1 - 2002 Q2.

<sup>2</sup> Robust standard errors in parentheses.





## Appendix F

### METHODOLOGY AND DETAILED MULTIVARIATE RESULTS

We estimated the outcomes reported in Section IV of the text and in the detailed tables below using a multinomial logistic regression. The formula is:

$$\Pr(y = outcome_i) = \frac{e^{X\beta^{(i)}}}{\sum_i e^{X\beta^{(i)}}},$$

$i \in \{work < 32, work32+, welfare \& work < 32, welfare \& work32+, welfareonly, neither\}$

We set “welfare only” to be the comparison, or base, category.

We estimated the model with Stata’s mlogit routine, using robust standard errors and clustering on respondents.

Table F-1  
Detailed Results, Number of Barriers <sup>1,2</sup>

	Welfare and <32 weekly hours of work	Welfare and 32+ weekly hours of work	<32 weekly hours of work	32+ weekly hours of work	Neither work nor welfare
<b>Barriers</b>					
One barrier	-0.32 (0.26)	-0.75 (0.35)	-0.27 (0.35)	-0.93 (0.34)	-0.50 (0.31)
Two barriers	-0.40 (0.26)	-1.36 (0.35)	-0.55 (0.39)	-1.36 (0.33)	-0.43 (0.30)
Three or four barriers	-0.84 (0.25)	-1.89 (0.36)	-0.69 (0.34)	-1.97 (0.33)	-0.42 (0.28)
Five or more barriers	-0.75 (0.28)	-1.97 (0.46)	-0.74 (0.41)	-2.67 (0.54)	0.017 (0.30)
<b>Sources of child care (supports)</b>					
Has regular source of family child care	0.62 (0.19)	1.26 (0.31)	0.45 (0.23)	0.95 (0.28)	0.02 (0.20)
Has regular source of nonfamily child care	0.36 (0.22)	0.96 (0.37)	0.05 (0.29)	0.44 (0.45)	-0.30 (0.28)
<b>Welfare and employment history</b>					
Fraction of quarters 1994–98, the respondent had EDD earnings	2.02 (0.27)	2.72 (0.44)	2.59 (0.44)	2.54 (0.45)	-0.68 (0.39)
Fraction of quarters, 1994–98, the respondent received welfare	1.00 (0.26)	1.56 (0.38)	-0.31 (0.33)	-0.28 (0.41)	-0.84 (0.25)
<b>Respondent characteristics</b>					
Age 25–34	-0.47 (0.20)	-0.39 (0.34)	-0.20 (0.27)	-0.22 (0.36)	-0.04 (0.26)
Age 35–44	-0.75	-0.40	-0.74	-0.72	-0.36

	Welfare and <32 weekly hours of work	Welfare and 32+ weekly hours of work	<32 weekly hours of work	32+ weekly hours of work	Neither work nor welfare
	(0.25)	(0.40)	(0.34)	(0.42)	(0.29)
Age 45 or older	-1.22 (0.37)	-1.32 (0.86)	-0.99 (0.47)	-0.67 (0.57)	-0.36 (0.35)
English not spoken at home and English proficiency limited	-0.03 (0.39)	-0.57 (0.69)	-0.38 (0.53)	-0.82 (0.68)	-0.47 (0.39)
Respondent foreign born	-0.02 (0.31)	-0.02 (0.43)	0.47 (0.52)	0.38 (0.51)	0.16 (0.38)
Male	0.86 (0.28)	1.01 (0.48)	0.16 (0.50)	1.18 (0.43)	0.51 (0.26)
Black	-0.08 (0.20)	-0.75 (0.31)	0.05 (0.30)	0.04 (0.31)	-0.35 (0.25)
Hispanic	0.051 (0.17)	0.12 (0.28)	0.23 (0.26)	0.29 (0.31)	-0.020 (0.23)
Other race/ethnicity	-0.51 (0.28)	-0.03 (0.43)	-0.40 (0.47)	0.01 (0.49)	0.41 (0.29)
Intimate partner in the household	-0.01 (0.18)	-0.64 (0.25)	0.00 (0.27)	-0.15 (0.31)	0.42 (0.21)
Other adult in the household	0.17 (0.16)	0.05 (0.25)	0.33 (0.23)	-0.29 (0.27)	0.15 (0.21)
Number of children 0–2	-0.13 (0.12)	-0.05 (0.18)	-0.49 (0.18)	-0.74 (0.28)	-0.37 (0.12)
Number of children 3–5	-0.11 (0.11)	-0.03 (0.16)	-0.40 (0.16)	-0.59 (0.22)	-0.006 (0.12)
Number of children 6–12	-0.088 (0.08)	0.18 (0.14)	-0.24 (0.11)	-0.051 (0.14)	0.025 (0.088)
Number of children 13–17	0.10 (0.12)	0.30 (0.20)	0.37 (0.16)	0.07 (0.19)	0.036 (0.14)
<b>Other controls</b>					
Interviewed at Wave 2	0.028 (0.15)	0.15 (0.22)	0.30 (0.23)	-0.012 (0.26)	-0.028 (0.19)
1999	0.21 (0.13)	0.55 (0.19)	0.18 (0.22)	-0.056 (0.23)	0.20 (0.14)
2000	0.37 (0.15)	0.85 (0.20)	0.47 (0.24)	1.14 (0.28)	0.47 (0.17)
2001	0.59 (0.17)	0.88 (0.24)	1.17 (0.24)	1.89 (0.30)	1.14 (0.17)
Unemployment rate x100, Stockton-Lodi MSA	-0.058 (0.033)	-0.09 (0.039)	0.021 (0.049)	0.039 (0.035)	0.066 (0.024)
Constant	-0.88 (0.52)	-2.45 (0.64)	-2.21 (0.75)	-1.72 (0.76)	-0.76 (0.51)
N	6,344				
Log likelihood	-8654.49				
Pseudo R2	0.13				

<sup>1</sup> Coefficients reported; standard errors adjusted for clustering within respondents in parentheses.

<sup>2</sup> Observations are quarterly (1998 through 2001).

Table F-2  
Detailed Results, Individual Barriers <sup>1,2</sup>

	Welfare and <32 weekly hours of work	Welfare and 32+ weekly hours of work	<32 weekly hours of work	32+ weekly hours of work	Neither work nor welfare
<b>Barriers</b>					
Lacks driver's license or has no access to a car	-0.54 (0.15)	-1.12 (0.22)	-0.32 (0.23)	-1.32 (0.27)	-0.29 (0.18)
Needs more child care	-0.24 (0.17)	-0.83 (0.28)	0.39 (0.27)	-0.89 (0.35)	0.45 (0.23)
Child needed extra care	-0.14 (0.16)	-0.86 (0.33)	0.15 (0.33)	-0.29 (0.32)	-0.56 (0.22)
Two or more physical health problems	-0.019 (0.18)	-0.46 (0.32)	-0.65 (0.29)	-0.45 (0.42)	-0.15 (0.22)
Two or more activity limitations	-0.35 (0.20)	-0.22 (0.34)	-0.72 (0.33)	-0.54 (0.41)	0.17 (0.21)
Mental health symptoms in the past 7 days	-0.12 (0.20)	0.30 (0.31)	-0.48 (0.30)	-0.31 (0.41)	0.15 (0.22)
Partner violence or control	0.38 (0.24)	0.17 (0.35)	0.36 (0.28)	0.62 (0.38)	0.29 (0.26)
Substance abuse symptoms	0.081 (0.17)	0.048 (0.27)	-0.23 (0.25)	0.050 (0.30)	0.28 (0.21)
Five or fewer work skills	-0.21 (0.21)	-0.44 (0.31)	-0.36 (0.26)	-0.68 (0.38)	0.14 (0.23)
No high school diploma or GED	0.093 (0.18)	0.043 (0.27)	0.27 (0.24)	0.0057 (0.33)	0.44 (0.19)
Ability to read or write English limits working	0.01 (0.41)	-0.55 (0.78)	-0.29 (0.54)	-0.48 (0.69)	-0.39 (0.38)
Criminal justice system involvement	-0.051 (0.22)	-0.19 (0.43)	0.36 (0.30)	0.038 (0.40)	0.087 (0.25)
<b>Sources of child care (supports)</b>					
Has regular source of family child care	0.66 (0.18)	1.42 (0.31)	0.37 (0.23)	1.13 (0.29)	-0.0076 (0.22)
Has regular source of nonfamily child care	0.37 (0.22)	1.05 (0.37)	-0.16 (0.32)	0.45 (0.45)	-0.44 (0.28)
<b>Welfare and employment history</b>					
Fraction of quarters 1994–98 the respondent had EDD earnings	1.85 (0.27)	2.55 (0.44)	2.37 (0.44)	2.37 (0.47)	-0.97 (0.37)
Fraction of quarters, 1994–98 the respondent received welfare	0.97 (0.26)	1.49 (0.37)	-0.28 (0.33)	-0.30 (0.43)	-0.94 (0.24)
<b>Respondent and family characteristics</b>					
Age 25–34	-0.45 (0.20)	-0.25 (0.33)	-0.04 (0.29)	-0.07 (0.36)	0.12 (0.25)
Age 35–44	-0.65 (0.25)	-0.24 (0.40)	-0.41 (0.34)	-0.47 (0.44)	-0.08 (0.30)
Age 45 or older	-1.09 (0.39)	-1.01 (0.84)	-0.54 (0.48)	-0.34 (0.58)	-0.21 (0.36)

	Welfare and <32 weekly hours of work	Welfare and 32+ weekly hours of work	<32 weekly hours of work	32+ weekly hours of work	Neither work nor welfare
English not spoken at home and English proficiency limited	-0.27 (0.26)	-0.64 (0.51)	-0.30 (0.39)	-1.55 (0.68)	-0.43 (0.28)
Respondent foreign-born	0.07 (0.34)	0.023 (0.45)	0.46 (0.57)	0.49 (0.51)	0.11 (0.40)
Male	0.78 (0.28)	0.84 (0.47)	0.12 (0.44)	1.02 (0.43)	0.48 (0.28)
Black	-0.023 (0.19)	-0.56 (0.33)	0.082 (0.29)	0.12 (0.31)	-0.16 (0.25)
Hispanic	0.14 (0.18)	0.33 (0.29)	0.25 (0.25)	0.41 (0.30)	0.095 (0.23)
Other race/ethnicity	-0.52 (0.28)	-0.034 (0.43)	-0.30 (0.44)	0.11 (0.47)	0.48 (0.32)
Intimate partner in the household	0.018 (0.17)	-0.74 (0.26)	0.13 (0.25)	-0.038 (0.30)	0.37 (0.21)
Other adult in the household	0.20 (0.17)	0.00053 (0.25)	0.49 (0.22)	-0.27 (0.27)	0.17 (0.21)
Number of children 0–2	-0.15 (0.12)	-0.040 (0.17)	-0.49 (0.18)	-0.73 (0.27)	-0.34 (0.13)
Number of children 3–5	-0.11 (0.11)	-0.025 (0.16)	-0.43 (0.15)	-0.64 (0.21)	0.0026 (0.12)
Number of children 6–12	-0.11 (0.086)	0.17 (0.14)	-0.30 (0.12)	-0.10 (0.15)	0.013 (0.092)
Number of children 13–17	0.091 (0.12)	0.31 (0.20)	0.33 (0.16)	0.044 (0.20)	0.064 (0.14)
<b>Other controls</b>					
Interviewed at Wave 2	0.018 (0.15)	0.15 (0.22)	0.30 (0.23)	-0.035 (0.25)	-0.053 (0.19)
1999	0.21 (0.13)	0.56 (0.19)	0.18 (0.22)	-0.053 (0.24)	0.20 (0.14)
2000	0.39 (0.15)	0.86 (0.21)	0.48 (0.25)	1.17 (0.29)	0.47 (0.17)
2001	0.58 (0.17)	0.84 (0.25)	1.21 (0.25)	1.89 (0.31)	1.17 (0.17)
Unemployment rate x100 (Stockton-Lodi MSA)	-0.059 (0.033)	-0.09 (0.039)	0.023 (0.049)	0.038 (0.036)	0.066 (0.025)
Constant	-1.05 (0.50)	-2.97 (0.60)	-2.60 (0.72)	-2.29 (0.77)	-1.33 (0.48)
N	6,344				
Log likelihood	-8492.98				
Pseudo R2	0.15				

<sup>1</sup> Coefficients reported; standard errors adjusted for clustering within respondents in parentheses.

<sup>2</sup> Observations are quarterly (1998 through 2001).

Table F-3  
**Number of Barriers, Observations Restricted to Quarters of Interviews<sup>1</sup>**

	Welfare and <32 weekly hours of work	Welfare and 32+ weekly hours of work	<32 weekly hours of work	32+ weekly hours of work	Neither work nor welfare
<b>Number of barriers</b>					
One barrier	-0.05 (0.56)	-1.33 (0.60)	-0.64 (0.78)	-0.77 (0.67)	-0.55 (0.77)
Two barriers	-0.12 (0.55)	-1.55 (0.61)	-0.11 (0.82)	-0.98 (0.64)	-0.06 (0.68)
Three or four barriers	-1.11 (0.53)	-2.49 (0.60)	-1.39 (0.71)	-2.24 (0.69)	-0.31 (0.68)
Five or more barriers	-1.26 (0.63)	-2.68 (0.78)	-1.85 (0.89)	-3.20 (1.11)	0.26 (0.71)
<b>Sources of child care (supports)</b>					
Has regular source of family child care	0.91 (0.35)	2.22 (0.45)	1.07 (0.48)	1.65 (0.54)	-0.12 (0.32)
Has regular source of nonfamily child care	0.68 (0.45)	1.28 (0.59)	1.01 (0.64)	0.07 (0.93)	-0.66 (0.49)
<b>Work and welfare history</b>					
Fraction of quarters 1994–98, the respondent had EDD earnings	1.84 (0.54)	2.26 (0.68)	1.90 (0.79)	1.80 (0.68)	-0.86 (0.78)
Fraction of quarters, 1994–98, the respondent received welfare	0.96 (0.50)	2.28 (0.62)	1.41 (0.75)	-0.42 (0.76)	-0.21 (0.45)
<b>Respondent characteristics</b>					
Age 25–34	-0.51 (0.40)	-0.07 (0.47)	0.88 (0.62)	0.49 (0.60)	-0.70 (0.48)
Age 35–44	-1.40 (0.51)	-0.98 (0.65)	-0.32 (0.71)	-0.49 (0.69)	-1.25 (0.55)
Age 45 or older	-2.49 (0.85)	-1.17 (1.40)	-1.00 (0.79)	-0.52 (0.82)	-1.85 (0.71)
English not spoken at home and English proficiency limited	1.12 (0.71)	0.27 (0.99)	-1.57 (0.98)	-0.35 (0.93)	-0.28 (0.55)
Respondent foreign-born	-0.88 (0.59)	-0.08 (0.74)	0.46 (0.86)	0.95 (0.95)	0.35 (0.65)
Male	1.16 (0.53)	0.77 (0.85)	-0.32 (0.88)	1.63 (0.67)	0.97 (0.56)
Black	0.07 (0.39)	-0.51 (0.52)	-0.16 (0.75)	0.37 (0.55)	-1.32 (0.55)
Hispanic	0.68 (0.36)	0.86 (0.47)	0.65 (0.55)	0.30 (0.58)	-0.07 (0.42)
Other race/ethnicity	-0.56 (0.63)	0.24 (0.72)	-0.01 (0.91)	-0.34 (1.01)	0.31 (0.52)
Intimate partner in the household	-0.34 (0.37)	-0.63 (0.42)	1.22 (0.60)	0.30 (0.56)	0.38 (0.37)
Other adult in the household	0.36 (0.32)	-0.80 (0.45)	1.46 (0.62)	-0.29 (0.47)	0.20 (0.39)
Number of children 0–2	-0.16 (0.26)	-0.08 (0.33)	-0.08 (0.36)	-0.89 (0.41)	-0.76 (0.28)
Number of children 3–5	-0.41 (0.26)	-0.24 (0.29)	-0.92 (0.41)	-1.31 (0.47)	0.07 (0.24)
Number of children 6–12	-0.33 (0.18)	-0.14 (0.22)	-0.95 (0.29)	-0.22 (0.21)	0.11 (0.16)
Number of children 13–17	0.48 (0.22)	0.61 (0.32)	0.79 (0.28)	0.24 (0.32)	0.27 (0.22)
Has regular source of family child care	0.91 (0.35)	2.22 (0.45)	1.07 (0.48)	1.65 (0.54)	-0.12 (0.32)
Has regular source of nonfamily child care	0.68 (0.45)	1.28 (0.59)	1.01 (0.64)	0.07 (0.93)	-0.66 (0.49)

	<b>Welfare and &lt;32 weekly hours of work</b>	<b>Welfare and 32+ weekly hours of work</b>	<b>&lt;32 weekly hours of work</b>	<b>32+ weekly hours of work</b>	<b>Neither work nor welfare</b>
<b>Other controls</b>					
Participated in Wave 2 interviews	0.04 (0.33)	-0.38 (0.40)	0.45 (0.62)	0.01 (0.52)	0.05 (0.38)
Year of interview	0.38 (0.34)	0.37 (0.43)	0.82 (0.46)	1.22 (0.47)	0.58 (0.27)
Unemployment rate in quarter of interview	0.10 (0.33)	0.27 (0.40)	-0.58 (0.47)	0.01 (0.44)	0.24 (0.38)
Constant	-1.91 (3.01)	-4.95 (3.58)	0.96 (4.11)	-1.51 (3.58)	-1.96 (3.33)
N	590				
Log likelihood	-740.99				
Pseudo R2	0.21				

<sup>†</sup> Coefficients reported; standard errors adjusted for clustering within respondents in parentheses.

Table F-4  
**Individual Barriers, Outcome Months Restricted to Quarters of Interviews<sup>1</sup>**

	Welfare and <32 weekly hours of work	Welfare and 32+ weekly hours of work	<32 weekly hours of work	32+ weekly hours of work	Neither work nor welfare
<b>Barriers</b>					
Lacks driver's license or has no access to a car	-0.65 (0.30)	-1.43 (0.38)	0.00 (0.51)	-1.73 (0.55)	-0.61 (0.30)
Needs more child care	-0.67 (0.41)	-1.20 (0.57)	-0.30 (0.72)	-2.57 (0.82)	1.20 (0.42)
Child needed extra care	-0.08 (0.38)	-0.79 (0.53)	0.37 (0.81)	0.89 (0.50)	-0.86 (0.44)
Two or more physical health problems	-1.25 (0.46)	-0.95 (0.53)	-1.35 (0.80)	-0.89 (0.76)	0.09 (0.34)
Two or more activity limitations	-0.30 (0.44)	0.06 (0.57)	-1.84 (1.33)	-0.51 (0.74)	-0.03 (0.34)
Mental health symptoms in the past 7 days	-0.71 (0.49)	0.03 (0.52)	-2.39 (1.03)	-0.16 (0.65)	0.21 (0.35)
Partner violence or control	0.72 (0.50)	0.93 (0.57)	1.38 (0.71)	1.38 (0.55)	-0.15 (0.51)
Substance abuse symptoms	0.47 (0.32)	-0.43 (0.52)	0.90 (0.50)	-0.16 (0.60)	0.87 (0.35)
Five or fewer work skills	0.17 (0.36)	0.13 (0.55)	-0.65 (0.51)	-0.34 (0.59)	0.22 (0.38)
No high school diploma or GED	0.04 (0.36)	0.11 (0.43)	-0.34 (0.52)	-0.90 (0.68)	0.39 (0.34)
Ability to read or write English limits working	-1.23 (0.66)	-0.91 (0.91)	0.27 (0.82)	-1.20 (1.24)	-0.48 (0.45)
Criminal justice system involvement	-0.03 (0.44)	-1.09 (0.64)	-0.54 (0.94)	-0.08 (0.79)	-0.18 (0.54)
<b>Sources of child care (supports)</b>					
Has regular source of family child care	1.15 (0.38)	2.52 (0.47)	0.96 (0.53)	2.20 (0.60)	-0.46 (0.39)
Has regular source of non-family child care	0.89 (0.47)	1.40 (0.65)	0.98 (0.76)	0.21 (1.02)	-1.37 (0.55)
<b>Work and welfare history</b>					
Fraction of quarters 1994–98 the respondent had EDD earnings	1.76 (0.54)	2.11 (0.70)	2.24 (0.86)	1.80 (0.81)	-1.40 (0.72)
Fraction of quarters, 1994–98 the respondent received welfare	1.10 (0.54)	2.30 (0.63)	1.48 (0.81)	-0.37 (0.82)	-0.48 (0.43)
<b>Respondent characteristics</b>					
Age 24–34	-0.37 (0.42)	0.13 (0.49)	0.97 (0.72)	0.37 (0.64)	-0.47 (0.49)
Age 35–44	-1.14 (0.53)	-0.67 (0.62)	0.11 (0.72)	-0.60 (0.73)	-0.89 (0.56)
Age 45 or older	-1.98 (0.88)	-0.67 (1.42)	-0.51 (0.99)	-0.22 (0.88)	-1.58 (0.69)
English not spoken at home and English proficiency limited	1.17 (0.84)	-0.20 (1.22)	-1.65 (1.04)	-0.17 (0.83)	-0.26 (0.56)
Respondent foreign-born	-0.75 (0.71)	0.10 (0.80)	0.93 (0.93)	1.60 (0.97)	0.48 (0.71)
Male	0.93 (0.54)	0.62 (0.91)	-0.91 (0.88)	1.49 (0.72)	0.64 (0.54)
Black	0.14 (0.41)	-0.14 (0.54)	-0.04 (0.78)	0.42 (0.54)	-1.20 (0.56)
Hispanic	0.81 (0.37)	1.11 (0.50)	0.66 (0.54)	0.46 (0.59)	0.08 (0.41)
Other Race/ethnicity	-0.52	-0.02	0.21	-0.81	0.26



	<b>Welfare and &lt;32 weekly hours of work</b>	<b>Welfare and 32+ weekly hours of work</b>	<b>&lt;32 weekly hours of work</b>	<b>32+ weekly hours of work</b>	<b>Neither work nor welfare</b>
Intimate partner in the household	(0.65) -0.21 (0.40)	(0.72) -0.78 (0.46)	(0.94) 1.40 (0.59)	(1.10) 0.44 (0.66)	(0.53) 0.36 (0.38)
Other adult in the household	0.45 (0.33)	-0.92 (0.48)	1.64 (0.60)	-0.31 (0.52)	0.20 (0.39)
Number of children 0–2	-0.19 (0.27)	-0.11 (0.33)	0.04 (0.39)	-0.82 (0.40)	-0.72 (0.28)
Number of children 3–5	-0.42 (0.25)	-0.29 (0.31)	-0.92 (0.40)	-1.47 (0.50)	0.14 (0.24)
Number of children 6–12	-0.37 (0.18)	-0.26 (0.23)	-0.97 (0.31)	-0.34 (0.28)	0.13 (0.16)
Number of children 13–17	0.41 (0.21)	0.56 (0.34)	0.66 (0.30)	0.13 (0.33)	0.31 (0.24)
<b>Other controls</b>					
Participated in Wave 2 interviews	-0.05 (0.34)	-0.43 (0.40)	0.53 (0.71)	0.05 (0.56)	0.04 (0.39)
Interview year	0.17 (0.37)	0.20 (0.43)	0.67 (0.54)	0.82 (0.52)	0.59 (0.29)
Unemployment rate in interview quarter	0.02 (0.37)	0.30 (0.48)	-0.77 (0.55)	-0.48 (0.50)	0.23 (0.40)
Constant	-1.38 (3.30)	-5.87 (4.18)	1.72 (4.85)	2.35 (4.09)	-2.09 (3.51)
N	590				
Log likelihood	-693.99				
Pseudo R2	0.26				

Coefficients reported; standard errors adjusted for clustering within respondents in parentheses.