Appendix 3

Survey Methodology and Data Weighting Methods

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Sample Design

The sampling frame for this survey consisted of single-parent Colorado Works cases in July 2002. In order to be selected, the case needed to be active, to have received a financial assistance payment in July, and to have the grantee as a case member, thus excluding child-only cases. A total of 5,824 cases were selected into the sample frame.

The initial sample was stratified based on the TANF time clock variable – the counter used to determine lifetime receipt of TANF. A key interest of the state was to accurately describe the characteristics of long-term recipients as well as the total caseload. For purposes of this study, long-term was defined as having received TANF for 25 months or longer. Since only one quarter of the cases met this criteria, we determined that a simple representative sample would yield too few long term cases.

To assure a reasonable number of interviews with long-term cases, we oversampled long-term recipients.

Population, Sample, and Completed Interviews by Sampling Strata			
	Total	Long Term	Others
In Sampling Frame	5824	1512	4312
Probability of Selection to Sample		.243	.097
In Sample	786	367	419
Interviews Completed	521	251	270

Survey Instrument and Pre-Test

The survey instrument was developed by Mathematica Policy Research (MPR) working in collaboration with researchers from the six states selected by the U.S. Department of Health and Human Services to participate in the study. The core instrument included a number of questions that were taken from the Michigan Women's Employment Survey (WES, Wave 2) and MPR's Nebraska Client Barriers Survey. Other scales were drawn from Washington State's Learning Disabilities screener, the Composite International Diagnostic Interview and the Conflict Tactics Scale. Additional questions were developed to meet the research interests of the participating states.

Mathematica pre-tested the instrument with a sample drawn from each of the participating states.

The instrument was then reviewed by the Office of Management and Budget and cleared for use.

Data Collection

All members of the sample were sent a letter by the Colorado Department of Human Services, informing them of the study and requesting their cooperation. They were told they would receive a $20 gift certificate if they completed the interview.[1] Individuals were asked to return a post card with updated contact information.

Data collection began in the middle of August 2002 and continued through early February 2003. In August, interviewers received two days of training on the instrument and the contact protocol. They called all sample members who had a phone number in the administrative records or on the postcard returned by sample members in response to the first mailing. Contacts were attempted on all days of the week and during both daytime and evening hours.

A second mailing was sent on October 1 by the University research team to all members of the sample who had not completed an interview. They were informed of the availability of an 800 number and urged to call in. Subsequent reminder mailings were sent October 28, November 20 and December 11.

Repeated attempts were made to obtain phone numbers. We regularly checked administrative records for the welfare and Food Stamp systems. We also checked computerized phone listings, but found them to be of little use.

Individuals were contacted many times. The average number of attempts was 7, but the maximum number of attempts was 53.

In late November, we mapped all of the addresses of sample members who had not yet been interviewed. If clusters were found in any of the metro area counties, a field interviewer was sent out. If the interviewer was able to confirm that a given address was valid, several field attempts were made over subsequent months.

Despite all of these efforts at contact, some respondents were never reached. Interviews were completed with 521, or two-thirds of the full sample. Interviews were completed in English, Spanish and Russian. One sample member was deceased, 39 refused to participate and 4 interviews could not be completed because of language barriers.

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[1]Those completing an interview were given a choice of a gift certificate to one of the two major supermarket chains, Walmarts, Walgrens, or McDonalds. Gift certificates were offered rather than cash, since under Colorado's regulations, cash would count as income for purposes of calculating welfare eligibility and grant amount.

Number of Phone Attempts by Disposition								
	Total		Phone Calls					
	N	%	Mean	0	1 - 2 Attempts	3 - 4 Attempts	5 -10 Attempts	More than 10 Attempts*
All	786	--	8	2.0%	23.3%	21.5%	31.2%	22.0%
Completed Interviews	521	66.3	6	0	28.8%	24.0%	30.3%	16.9%
Refusals	39	5.0	10	0	10.3%	7.7%	51.3%	30.8%
Bad / Wrong / No Phone Number**	126	16.0	5	12.7%	19.0%	27.8%	30.2%	10.3%
Language Barrier	4	1.0	4	0	50.0%	25.0%	25.0%	0
Unable to reach - No answer**	96	12.2	18	0	3.1%	5.2%	29.2%	62.5%

*The upper most range is 53 attempts.
**After November 2002, we also attempted to contact these sample through field work in the Front Range area. Previously we had tried to reach them with a mailing, and then attempted to locate valid telephone numbers.

Data Cleaning and Data Entry

All interviews were reviewed for missing data and internal inconsistencies. Call backs were made to clarify issues.

All data were entered into an ACCESS data base, which was designed to minimize data entry errors.

The data were then transferred into SPSS for analysis and merged with basic administrative records.

Weighting

Since the initial sample was stratified based on the TANF time clock variable and different sampling weights were applied to the two strata, the data must be weighted to reflect the probability of selection into the sample. As noted earlier, long-term TANF recipients were over-sampled to ensure sufficient numbers of respondents to support separate analyses. When all cases are included in the analyses, it therefore is necessary to use a weighted file that corrects for

this over-sampling. Long term recipients received a weight of .55 and shorter term recipients of 1.39. This keeps the total number of surveys in line with actual completions and ensures the integrity of statistical tests.

In any survey that achieves less than a 100% response rate, there is a risk that respondents differ in systematic ways from non-respondents. If this is the case, it can introduce bias into the analysis, unless the data are adjusted to mitigate the differences. To assess whether sample members who responded to the survey differ from non-respondents, we compared the two groups on a number of characteristics using administrative data. The results of the analysis are presented in Table ...

Significant differences exist on three factors – length of time on TANF, residence in the Denver metro area, and gender. We had a lower response from males than females, from those who were on TANF just a short time and from respondents outside the metro area. The response bias is easily understandable on two of the three factors. Short-term recipients are harder to locate since we were less likely to find up-dated addresses in administrative files during the course of the field work. Metro area residents were interviewed more often than others since more field attempts were feasible in the metro area than elsewhere in the state.

Comparison of Respondents and Non-Respondents				
	Respondents	Non-Respondents	Difference	Sig.
Mean Age	29.6	30.4	-0.8	0.16
Percent Female	96.5	92.0	4.5	0.00
Percent Non-Hispanic White	43.5	48.0	-4.5	0.22
Percent Not-Married	76.5	76.8	-0.3	0.85
Number of Children on the Grant	1.88	1.87	-0.01	0.87
Percent Living in Metro area	59.6%	48.8%	10.8	0.00
Mean Months on TANF	18.98	16.77	2.21	0.00

A final set of weights was calculated based on two factors – the TANF time clock and residence in the Denver metro area. There are unique weights for each of six cells shown in the last column of the table below. After the application of the weights, the proportions in the completed sample match those in the entire single-parent TANF caseload. These weights take into account the differential probability of being sampled (noted earlier) as well as differences in the proportion responding to the survey.

Derivation of Sample Weights				
Residence	Months on TANF	Percent of Total Caseload	Percent of Respondents	Weight Assigned*
Metro Area	Under 12	23.8	17.7	1.34
	13 - 24	13.9	12.5	1.11
	More than 24	14.1	30.5	0.46
Outside Denver Metro	Under 12	22.5	12.5	1.8
	13 - 24	13.8	9.2	1.5
	More than 24	11.8	17.7	0.67
*The weight for each classification is calculated as the ratio of that group's share of the total caseload divided by its share of actual survey respondents.				

After weighting the sample, the attributes of the survey respondents were compared with the attributes of the overall caseload. The distributions are quite similar on all available measures. We can be reasonably confident in drawing inferences about the single parent welfare caseload from statistics computed on the basis of the survey data.

Comparison of Respondents and Non-Respondents		
	Total Single Parent Caseload	Survey Distribution After Weighting
Age – Mean	29.7	29.4
% under 23	23.1	26.0
% 23 - 27	25.7	23.4
% 28 - 34	24.0	22.7
% 35 and older	27.3	27.9
Gender % Female	95.6	96.3
Race/Ethnicity		
% Non-Hispanic White	46.2	45.8
% Percent Hispanic	29.8	31.5
% African American	19.3	17.9
Marital Status		
% Single	76.9	75.6
% Married	7.6	9.3
% Separated, Divorced or Widowed	15.6	15.1
Number of Children on the Grant - Mean	1.94	1.85
% Pregnant or One child	43.2	48.1
% 2 children	30.9	28.5
% 3 children	16.7	15.0
% 4 or more children	9.2	8.4
Lifetime Months on TANF - Mean	18.2	18.3
% 6 months or less	22.9	21.7
% 7 - 12 months	23.5	24.6
% 13 - 24 months	27.7	27.8
% over 24 months	26.0	25.9
Region		
% Denver	23.9	24.2
% Denver Suburban	28.0	27.5
% Other Front Range	27.0	28.5