



WELFARE REFORM IN WASHINGTON STATE (C)

Skill Set 3: Random Variables

Entries to and exits from TANF determined the net change in the welfare caseload. The caseload had decreased dramatically since Washington's WorkFirst program was implemented, and many TANF recipients were making the transition from welfare to work. However, Clare Banks was concerned about the recent decline in the number of clients leaving welfare. There were many factors that influenced a client's ability to leave TANF and, before Banks could analyze the impact of such factors, she needed a better understanding of entries to and exits from TANF.

Banks hoped the WorkFirst study results could provide additional insight into flows on and off welfare, which in turn would help DSHS learn how to better help clients move from welfare to work. The study sample of more than 3000 families was drawn from the statewide list of adults receiving welfare assistance in March 1999, and the study examined the number of months clients spent on TANF and the number of exits from and returns to TANF from March 1999 to February 2000. To improve her understanding of caseload dynamics, Banks asked her student intern to analyze the WorkFirst study and present her with a memo describing the data.

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Number of Months on TANF from March 1999 to February 2000

Number of Months	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	161	5.29	163	5.36
2	184	6.05	347	11.4
3	178	5.85	525	17.25
4	169	5.55	694	22.81
5	161	5.29	855	28.1
6	177	5.82	1032	33.91
7	160	5.26	1192	39.17
8	165	5.42	1357	44.59
9	173	5.69	1530	50.28
10	170	5.59	1700	55.87
11	210	6.9	1910	62.77
12	1133	37.23	3043	100

Exits from TANF from March 1999 to February 2000

Number of Exits	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	1138	37.4	1138	37.4
1	1606	52.78	2744	90.17
2	268	8.81	3012	98.98
3	28	0.92	3040	99.9
4	3	0.1	3043	100

Entries to TANF from March 1999 to February 2000

Number of Entries	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	2231	73.32	2231	73.32
1	691	22.71	2922	96.02
2	103	3.38	3025	99.41
3	16	0.53	3041	99.93
4	2	0.07	3043	100

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Questions

Months on TANF

1. What was the probability that a WorkFirst study respondent spent 3 or more months on TANF from March 1999 to February 2000? Less than 3 months?
2. What was the probability that a study respondent spent more than 6 months on TANF from March 1999 to February 2000? More than 9 months?
3. What was the probability that a study respondent spent between 2 and 4 months on TANF during this period? Between 6 and 8 months on TANF? Between 10 and 12 months?
4. How many WorkFirst Study respondents remained on TANF the entire period (March 1999 to February 2000)?
5. Among the WorkFirst Study respondents, what was the mean, or expected, number of months spent on TANF during this one-year window? The median? The mode?

Exits from TANF

6. How many study respondents did not exit from TANF from March 1999 to February 2000?
7. What was the mean number of exits from TANF during this period?
8. What was the probability that a study respondent exited from TANF at any point from March 1999 to February 2000?
9. What was the probability that a study respondent did not exit at any point during this period?

Entries to TANF

10. What was the probability that a study respondent entered TANF at any point from March 1999 to February 2000?
11. What was the mean number of entries to TANF from March 1999 to February 2000?
12. What was the standard deviation of the number of entries to TANF during this period?
13. Of those who did not enter TANF from March 1999 to February 2000, how many had never left TANF? How many clients had left TANF but had not returned?
14. Write a memo summarizing the results of your analysis for your supervisor, who has a non-statistician background.