Development of a Screening Tool to Improve Management of the Welfare Caseload in Kentucky[1]

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Abstract

As part of the evaluation of the welfare program in Kentucky, descriptive and multivariate techniques were used to develop and test a brief screening tool. The purpose of this tool is to identify clients at risk of using 80% or more of the lifetime limit for cash assistance provided through the Kentucky's Transitional Assistance Program (KTAP). The variables for the screening tool were identified through discriminant analysis and logistic regression using data from the KTAP administrative records and from two surveys: a panel study conducted with a representative group of KTAP recipients, and a point-in-time survey conducted with a representative sample of clients who reached their lifetime limit of cash assistance in 2001. Descriptive analyses using panel data show the stability of measures over time and their ability to set apart the segment of population at risk for high utilization of their available time on KTAP. The predictive value of the screening tool was tested with regression models using the KTAP utilization information available from the administrative records.

Keywords: Welfare, Temporary Assistance Program, Low-income, Poverty, Women and Children, Needy Families

Welfare Reform in Kentucky

The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), signed into law by President Clinton on August 22, 1996, replaced the Aid to Families with Dependent Children (AFDC) Program with a federal block grant named Temporary Assistance for Needy Families (TANF). In Kentucky, the TANF program is referred to as the Kentucky Transitional Assistance Program (KTAP). It was implemented in October 1996. The primary difference between the two programs is that TANF, unlike AFDC, requires states to place welfare recipients into work and training programs. Furthermore, a time limit for the transition from welfare to work is set at a total of five years or 60 months over an individual's lifetime.

In October 2001, at the 60-month anniversary of the KTAP program, Kentucky ceased cash assistance benefits to individuals who had continuously received benefits since October 1996. However, states are allowed to exempt certain cases and continue to provide benefits for up to 20% of active welfare recipients. This legislation presents Kentucky and other states with a challenging task because most of its welfare recipients have limited education, work skills, and work experience. Some also have poor physical and mental health status and experience substance abuse and domestic violence.

Administrative records show that a very small proportion of Kentucky welfare clients (less than 2%) reached the 60-month time limit in October 2001, and that only about 25% of the cases that reached the time limit were extended beyond 60 months. Furthermore, administrative records show that there were approximately 1.5% of active cases with 60 months or more on KTAP. While there is a large difference between the proportion of clients who reach the time limits in Kentucky and the allowed ceiling, the Kentucky Cabinet for Health and Family Services (CFHS) recognized that there is room for improvement of services, and implicitly of welfare outcomes.

At the time this study was conducted, practices varied from region to region within the state, but generally when a case reached 36 or more months on KTAP an alert notified case managers that they should consider the case for intensive case management. However, most commonly, only clients with less than 12 months of eligibility remaining in their lifetime limit of 60 months became the focus of increased attention and efforts to help them avoid reaching the time limit by advancing on a path toward self-sufficiency. Some of these cases were referred to the Targeted Assessors Program (TAP), Department of Vocational Rehabilitation, and/or local mental health agencies as appropriate within the limit of the availability of more intensive services.

Purpose of Study

The Kentucky Welfare Reform Evaluation team was charged with the task of using existing administrative data and survey information in order to find ways with which to identify high-risk cases at an earlier point in time. This article describes the steps, the logic behind them, and the statistical analyses used to create this tool. It should be noted that the tool was developed based on welfare population data collected in Kentucky, and it is not intended for screening of other welfare populations.

The purpose of this article is to describe the process we used to identify salient characteristics of cases that reached the lifetime limit for temporary cash assistance. The resulting variables were further tested for their predictive value in this study population. Case managers may use a questionnaire comprised of these indicators to screen all cases that reach 24 months on KTAP, with the goal of identifying clients at greatest risk of reaching the 60-month time limit. Using this tool earlier increases the lapse between screening and time limit, and as a result, the likelihood of moving clients onto a path toward self-sufficiency also increases. The paper concludes with recommendations on how to conduct the screening process and what variables to use at each screening phase.

Data Sources and Sampling

The analysis draws upon existing administrative records and data taken from two surveys. The first survey was conducted between 1998 and 2001 with a representative sample of KTAP recipients; a stratified random sample of KTAP recipients was selected from the active cases as of March 1998. Specifically, out of each of the eight strata of counties obtained using a cluster analysis of county demographic and socioeconomic characteristics, 80 cases were randomly chosen.

In 1998, the first year of the panel study, 503 telephone interviews were completed. About 200 new subjects were added every year until the end of the panel study; new cases were randomly drawn from active cases in the spring of each year. The response rate was over 70% in the initial year, and a minimum of 90% was obtained for at each follow-up (1999, 2000, 2001). Over the four years, 419 subjects completed four interviews, 234 completed three, 210 completed two, and 259 were interviewed only once.

A second survey was conducted during the spring and summer of 2002 with a stratified random sample of clients who reached the 60-month time limit. Some cases were discontinued from KTAP cash assistance once they reached the time limit, while other cases were approved for an extension to continue receiving cash assistance. The caseload that reached the 60-month time limit was split into two groups – extended and discontinued – and simple random samples of 295 and 336 cases, respectively, were selected from each group. The overall response rate for this survey was 62% (390 responses to 631 mailed invitations); the response rate for the extended group (66%) was significantly higher than the rate for discontinued cases (58%).

In addition to using the discontinued (N=195) and extended (N=195) groups for the study described here, we also selected a comparison group from the sample extracted in 1998 for the panel survey. This group included 292 inactive KTAP cases, including clients who left KTAP before reaching the time limit; we will refer to this comparison group as the "leavers." Thus, the final sample for this study included a total of 682 extended, discontinued, and leaver cases.

Survey records – from panel and time limit cross-sectional studies – include family and child well-being measures, employment-related indicators, and information about financial hardships and use of benefits. For all survey cases, we extracted historical information from the administrative records using the social security number of the primary adult on the case. The administrative records include information about demographic characteristics, family composition, as well as the use of KTAP cash assistance and other services.

Descriptive and multivariate techniques were used to develop and test a screening tool to identify the clients likely to reach 48 or more months on KTAP. The variables that make up the screening tool were identified through traditional descriptive analyses, discriminant analysis, and logistic regression using cases from the time limit study. Descriptive analyses using panel data demonstrated the stability of the measures over time and their ability to set apart the segment of population at risk for high utilization of their available time on KTAP. Finally, the predictive capability of the variables was tested with logistic regression using KTAP utilization data from the administrative records. As of December 2001, the binary outcome was defined as "having reached the time limit" versus "not having reached the time limit". Finally, in order to assist in the computation of sample weights, a 10% random sample of all cases in the administrative database was used to extrapolate the results obtained with the survey data to the general KTAP population.

Relevance of Screening

The reasons for extending KTAP benefits provide a first insight into the type of case management needed by clients who reach the KTAP time limit and obtain an extension. Descriptive analyses showed significant but small differences in the proportion of discontinued and extended clients who have poor physical health or insufficient employment. Further, multivariate analyses revealed that the characteristics and/or circumstances of discontinued and extended clients are very similar. It appears, therefore, that extended and discontinued clients are hard-to-serve cases and that they have similar barriers to self-sufficiency over time. It is important to identify the hard-to-serve cases as soon as possible and provide them with more specialized care via an intensive case management (ICM) program that aims to reduce their risk of reaching the time limit. Thus, the question is, at what point in time would it be most beneficial and cost-effective to screen for these characteristics?

Danziger et al. (2000) showed that there is a strong association between (1) employment status, (2) socio-demographic characteristics (family structure, number of young children, urban residence), and (3) human capital, job-related skills or physical/mental health. Some authors argue that the presence of a single barrier may not be as critical as the presence of multiple barriers and that some combinations of barriers are more unfavorable than others (Danziger et al., 2000; Olson & Pavetti, 1996).

The objectives of this study were to (1) identify the ways in which clients who reach the time limit are different from those who leave KTAP before they reach the time limit, (2) discover the combination of conditions/barriers that has the greatest likelihood of predicting who will exhaust their 60 months of eligibility, and (3) understand how leaver, extended, and discontinued clients differ by identifying patterns among variables as a whole.

Target Population

To gain a preliminary understanding of utilization patterns in the KTAP population as a whole, administrative data for clients, enrolled in KTAP for one or more months, between October 1996 and October 2002, were examined. First, the welfare population was divided into three groups by their length of time on KTAP: low utilization (used 40% or less of eligible months), medium utilization (used more than 40% but less than 80% of available time) and high utilization (used 80% or more of eligible months). About 65% of all clients who were on KTAP between October 1996 and October 2002 had entered KTAP between October 1996 and November 1997 (and thus had the *potential* for more than 60 months of KTAP utilization as of October 2002). However, about 60% were on KTAP for 25 to 48 months and only 8% were on KTAP for more than 48 months. This preliminary analysis supports the idea that screening clients for intensive case management has the potential to balance efficiency (that is, not screening the large proportion of clients who leave KTAP on their own, without intensive case management) and effectiveness (targeting a smaller proportion of clients who are likely to remain on the KTAP caseload once they exceed 24 months).

The lower end of the utilization range for the middle group (40% of total time in the system) was chosen because we know from the administrative records that a majority (70%) of clients in each cohort leave the system during the first 24 months; 24 of 60 months is 40%. An upper cutoff point of 99% of the total time in the system was chosen later based on the proportion of clients in the administrative system who reached the time limit, which, as we mentioned earlier, was only 1.5% of all welfare clients.

From the administrative records of 2004, we found that, on average, 68% of cases were "low" users, 19% fell into the "medium" utilization group (higher than 40% but less than 99%), and

12% were in the "high" utilization group (99% or higher). This was also true when looking at the data by annual cohorts. Weighting was used to ensure representativity of the time limit study sample to the KTAP population (i.e., because high users were overrepresented in the study sample, data were weighted in the multivariate analyses to correspond with their proportion in the entire caseload).

Given that providing intensive case management to the entire caseload of active clients with 25 or more months on KTAP would be costly, our challenge was to find indicators for screening the KTAP population that would significantly and strategically reduce the pool for intensive case management.

## Who Are the Clients Likely to Reach the Time Limit?

The multivariate analyses included two statistical techniques: discriminant analysis and logistic regression. Discriminant analysis provides an understanding of the overall differences among groups, while logistic regression estimates the odds of a particular outcome when certain indicators are present. It is noteworthy that the main source of data for this study is the 2002 point-in-time survey of KTAP clients who reached the 60-month time limit as of December 2001; thus, our data made it inappropriate to use more sophisticated analyses such as event history.

Discriminant analysis was used to decide whether the outcome for the logistic regression should be "reaching the time limit" or "being extended over the time limit", and to identify the set of indicators that best differentiated leavers from the clients who reached the time limit. Therefore, discriminant analysis helped us identify the ways in which the three groups differ from one another, provided support for the two sets of clients that reached the time limit (extended and discontinued) to be grouped together into the "time limit" group, and yielded the list of variables that differentiated between the leavers and the time limit groups. Once these variables were known, they were used to predict the cases that would most likely reach the time limit through the use of a binomial logistic regression.

following indicators (in no particular order) were found to be significantly different across groups and were retained in the final set of indicators: unemployment rate in the county of residence, respondent and/or children's perceived overall health, medical coverage, perceived financial situation as compared to the previous year, improvement in educational level within the last five years, presence of another working adult in the household, food security, and planned participation in Kentucky Works Program (KWP) activities. Each combination is referred to as a *discriminant function* where the first function identifies the most variation, the second function pinpoints the second most variation, and so on. For this analysis, two significant discriminant functions[6] are computed, with a combined chi-square of 523.8, DF=22, (p<0.001).

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[6] Prior probabilities were computed from group sizes
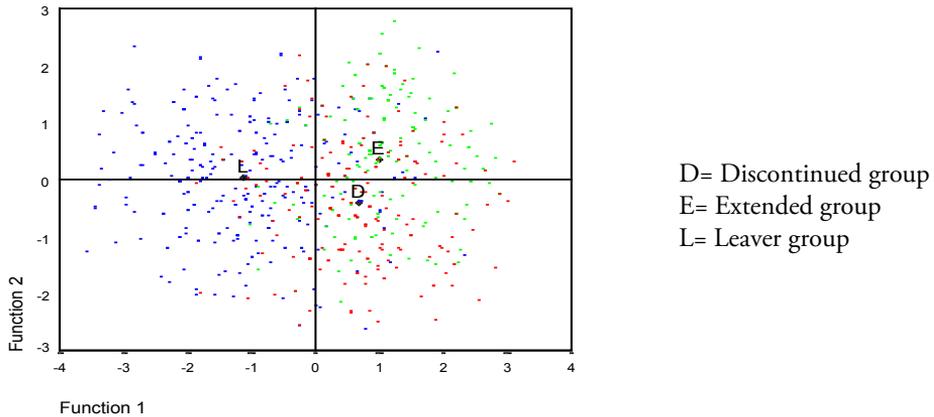
Figure 1: *Territorial Map*

The territorial map in Figure 1 shows the group centroids for the leaver, discontinued and extended groups. The first discriminant function (horizontal axis) maximally separates the leaver group from the two time limit groups. Function-2 (vertical axis) discriminates between discontinued and extended groups, with the leaver group falling between them.

The variables that loaded on Function-1, accounting for 90% of the variability among groups, were the appropriate predictors of reaching the time limit, and they were further included in the logistic regression. After removing the first function, the amount of variability explained by the second function alone remained significant, which means that the extended and discontinued groups are significantly different from each other in the characteristics that loaded on Function-2. The characteristics loading on Function-2 were not to be included in the logistic regression as the extended and discontinued cases were grouped together into the *time limit* group.

The predictor variables loading on Function-1 (Table 1), in descending order of their influence are food security, employment status, respondent's subjective assessment of his/her overall health, respondent's health insurance coverage, children's overall health, presence of another working adult in the household, and lack of work experience at intake (enrolment in the KTAP program). Thus, clients who reach the time limit (either discontinued or extended) are more likely than leavers to report food insecurity, to be unemployed, to perceive their own health or the health of their children as fair or poor, to *have* health insurance (i.e., Medicaid coverage), to have no other working adult in the household, and to lack work experience at KTAP enrollment.

The results suggest that the predictor that best distinguishes between *leavers* and the *time limit* groups is a family's food security (0.67), the only predictor with a Function-1 loading greater than 0.5. Note that participation in the KWP/work activities (Function-2 loading of 0.57) is the predictor that best distinguishes between the discontinued and extended groups; however, this comparison was not the focus of this study.

Table 1: *Loadings on Discriminant Functions*

Measure	Function	
	1	2
Insecure food (with hunger or severe hunger)	0.666*	-0.305
Unemployed	0.433*	0.269
Fair/Poor health (respondent)	0.420*	0.338
No health coverage (respondent)	-0.351*[7]	0.029
Fair/poor health (children)	0.292*	0.179
No other working adult	0.273*	0.007
No work experience	0.188*	0.096
No planned KWP/work participation	0.093	0.566*
Worse financial situation compared to 12 months ago	0.371	-0.464*
Unemployment rate (standardized)	0.238	0.291*
Educational improvement	-0.110	0.157*

*Largest absolute correlation between each variable and any discriminant function

The leavers were the least likely to reside in areas with high unemployment and the most likely to have had work experience at intake. Their experience during their first months off KTAP was expected to be comparable to that of the discontinued clients. However, they were significantly different in their access to health coverage after welfare. In 27.7% of the cases, leavers lacked medical coverage as compared to 6.7% of discontinued cases. Still, the leaver group had more cases with an improved financial situation (60.9%), the fewest cases of food insecurity with hunger or severe hunger (12.7%), and the fewest cases with health problems in the household. It is noteworthy that the leaver group had a significantly smaller proportion of children in fair or poor overall health (13%) than the discontinued (26.7%) group.

The set of differentiating indicators identified above was further used to predict group membership. Discriminant analyses correctly predicted the actual group membership for 67.3% of the original 682 cases. Furthermore, 65.7% of cross-validated grouped cases were correctly predicted, showing that the model is valid (albeit most successful in identifying leaver cases). For the three groups, 81.8% of leaver cases, 66.7% of extended cases, and 46.2% of discontinued cases were correctly predicted.

The model discriminated better when simply predicting whether or not a case will reach the time limit. It correctly predicted that 88.4% of the extended cases would reach the time limit (66.7% predicted to be extended plus an additional 21.7% predicted to be discontinued). For discontinued cases, 75.9% are correctly predicted to reach the time limit (46.2% predicted to be discontinued and 29.7% predicted to be extended). Of the original 682 cases, the prediction model identified 373 (or about 55% of all cases) as "likely to reach the time limit." Results show that 320 (86%) of these 373 cases have in fact used all 60 months (and were either extended or discontinued). Thus, offering more intensive services and support to all 373 cases screened as "at risk" by the prediction model is cost-justifiable, particularly if such interventions succeed in decreasing the number of cases that use the lifetime limit.

As previously described, discriminant analysis revealed that the most important differences are between KTAP leavers and time-limit clients (whether discontinued or extended). *Logistic regression* further improved our ability to predict who are the clients that are most likely to reach the time limit, by identifying the best combination of predictors. Based on client-specific information on each of the measures identified with the discriminant analysis (i.e., the indicators loading on Function-1) and further included in the logistic model, the chances (odds) of reaching

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[7] Note: A negative coefficient indicates that the interpretation should be opposite to the actual label of the coefficient (i.e., with health insurance coverage rather than no health coverage, better rather than worse financial situation as compared to 12-months ago).

the time limit were estimated. Table 2 displays the logistic regression coefficients that predicted membership in the group that reached the time limit. Differences might be noticed between the indicators in the logistic model and the indicators loading on discriminant Function-1. This is because in the logistic model we controlled for the region of residence and for presence in the household of children that were five year old or younger, but we did not control for the respondent's employment status. These adjustments were made in light of the significant relationship between employment status and all other indicators in the model, including the area of residence and having a young child in the home. Clients residing in Appalachia, who had children below school age living in the household, with no work experience, with poor or fair health, and/or food insecurity were more likely to be unemployed.

Table 2: *Logistic Regression Coefficients*

Indicators	B	S.E.	Wald	df	Sig.	Odds Ratio	95.0% C.I.	
							Lower	Upper
Reside in Appalachia	0.969	0.2	23.591	1	0.000	2.635	1.782	3.896
Lack of work experience	0.577	0.216	7.158	1	0.007	1.781	1.167	2.718
Food insecurity with hunger	1.537	0.23	44.532	1	0.000	4.651	2.961	7.304
Adult in fair/poor health	0.993	0.192	26.724	1	0.000	2.700	1.853	3.935
Child below age 5	0.768	0.31	6.156	1	0.013	2.156	1.175	3.957
Child in fair/poor health	0.576	0.234	6.057	1	0.014	1.779	1.125	2.816
No other working adult	1.485	0.329	20.393	1	0.000	4.413	2.317	8.406
Constant	-2.803	0.352	63.291	1	0.000	0.061		
Dependent Variable: "Reached time limit?" answers: yes=1 no=0; Nagelkerke's R^2 = 37.4%								

The logistic model is accurate in predicting clients who leave KTAP before reaching the time limits 68.5% of the time. It is even more useful in predicting cases that use all their available time on KTAP; the model accurately classified 81.3% of cases that reached the time limit. In other words, eight out of every ten clients who use all 60 months of KTAP eligibility are identified in advance using this model. Regardless of the actual scores on these measures, using this model to predict whether or not cases will reach the time limit results in a correct prediction about 75.8% of the time.

All results reported in Table 2 are statistically significant; the chi-square test (χ^2=222.4 with df=7, p<.000) indicates that the set of indicators significantly improves our ability to predict the outcome. Furthermore, the reliability of this specific combination of indicators has been confirmed by the Hosmer & Lemeshow test (χ^2=12.08 with df=8, p=0.148).

The regression coefficients were further used to discover how much the odds of reaching the time limit would change for each particular combination of characteristics. The odds for a case with none of the risk factors (constant) were quite favorable with odds of .061 to 1; this type of case will most probably not reach the time limit. Because the odds ratios for all indicators in the model were greater than one, any of the other characteristics (e.g. lack of work experience, young child, and children with fair/poor health) would increase the risk of reaching the time limit. The change in odds when multiple risk factors are present can be calculated by multiplying their odd ratios, which can then be converted into probability of reaching the time limit.

The strongest predictor of group membership was food insecurity with hunger or severe hunger. Cases experiencing food insecurity with hunger or severe hunger were about 4.65 times more likely to reach the time limit than clients with food security or food insecurity/no hunger.

This characteristic alone would not lead to maximum utilization of KTAP time; if no other risk were present, the client would have a p=0.221 probability of reaching the time limit.

The second strongest indicator was the absence of another working adult in the household; 89.3% of the cases fall into this category. The cases without another working adult in the household were 4.41 times more likely to use all 60 months of eligibility than those with a second wage earner. If a case had both insecure food and no other working adult in the household, the probability of reaching the time limit increased to p=0.556. It should be noted that most cases did not have two employed adults.

The third most significant indicator was the respondent's perceived overall health. Almost half of the sample reported fair or poor overall health; they had a p=0.141 probability of reaching the time limit. Respondents with health problems are 2.7 times more likely to reach the time limit than those in good health. If children are in fair or poor health (24.3% of the caseload) the case is 1.78 times more likely to utilize all 60 months.

Area of residence ranked fourth in terms of importance for predicting group membership. While living in Appalachia alone brought a 13.8% chance of reaching the time limit, living in Appalachia *and* having no prior work experience raised the probability of reaching the time limit to 22.3%.

Finally, a measure of family structure that significantly predicts reaching the time limit is the presence in the household of a child who is five years old or younger. Cases with young children had about 1 in 9 chances of reaching the time limit.

The presence of more than one risk factor increases the likelihood of accurately predicting who will reach the time limit, and particular combinations of risks may have a stronger impact than others. These issues bring us back to the questions posed earlier: Which combinations of indicators are most likely to predict that a client is at risk of reaching the time limit? How prevalent are these combinations in the actual time limit population? How early could they be identified and at what cost?

Based on the model identified above, the group of cases with the highest probability (96%) of reaching the time limit includes clients who reside in Appalachia, lack work experience at intake, have no other working adult in the household, have at least one child aged five or below, perceive their own and their children's overall health as fair or poor, and experience food insecurity with hunger. Thus, for the screening tool we chose the first three strongest predictors: lack of a second working adult, food security, and respondent's health. In addition, children health variables were included because of their significant relationship with the respondent's perceived overall health.

Testing the Screening Tool

The results of the multivariate analyses showed that screening cases for the absence of another working adult in the family, food insecurity, and fair/poor health of the respondent and his/her children would identify cases with a very high probability of reaching the time limit. Therefore, these measures may be used to screen all active clients who used between 24 and 48 months in order to assess their risk to reach the time limits. The group with 48 months or more is automatically included in the intensive case management (ICM) program.

To test this screening model, cases with the characteristics mentioned above were identified for each year of the panel data, and their KTAP utilization pattern is examined. The questionnaire used in 1998 did not include the food security scale, thus the first survey was excluded from this analysis.

Table 3 displays the distribution of clients with at least one risk characteristic by year for the entire panel study sample and for a subsample of clients who had used at least 24 months of cash assistance (the medium and high utilization groups).

Table 3: *Screening Measures by Panel Year (1999-2001)*

Measure	1999 (N=682)		2000 (N=857)		2001 (N=1015)	
All Panel Sample	N	%	N	%	N	%
No other working adult	568	83.3	689	80.4	783	77.1
Insecure food	92	13.5	116	13.5	148	14.7
Health (Fair/poor)						
Respondent	248	36.3	497	34.6	381	37.5
Children	102	14.9	123	14.4	157	15.4
Subsample ≥24-month on KTAP	1999 (N=411)		2000 (N=512)		2001 (N=639)	
No other working adult	351	85.4	443	86.5	523	81.8
Insecure food	58	14.1	67	13.1	95	14.8
Health (Fair/poor)						
Respondent	152	37.0	185	36.2	256	40.1
Children	72	17.5	91	17.8	116	18.2

About 60% of the panel sample used 24 or more months of KTAP cash assistance; a somewhat smaller screening group may be achieved by eliminating cases with a second working adult in the household. At least 82% of the medium and high KTAP user groups have no other working adult in the household, 36% or more respondents are in fair or poor health, about 18% have children in fair or poor health, and over 13% report food insecurity. The small differences across the years show that these measures are likely to remain the same unless some type of intervention occurs.

While 60% of the panel samples over the years were medium and high KTAP users, these groups represented only 23% of the general KTAP population (that is these users were overrepresented in the study sample); thus, data required weighting. The low utilization group includes 321 cases, and represents the 8,074 cases with low KTAP utilization from the 10% sample. The 321 cases should comprise 68.9% of the panel sample instead of 31.6%. Similarly, the weight or influence of the other two groups must be reduced to accurately reflect the proportions in the population, obtained from the analysis of a random ten-percent sample. For testing the tool we used the 2001 panel weighted sample, as shown in Table 4.

Table 4: *Number and Percentage of Clients with Specific Screening Characteristics (2001 panel)*

Measure	2001 (N=11,722) Weighted 4th panel survey		2001 (N=3,638) Weighted >24-month		2001 (N=2,948) Weighted, >24-month 1 adult earner only	
Screening Measures	N	%*	N	%	N	%
On KTAP ≥24 months	3638	31.0	3638	100.0	2948	100.0
No 2nd working adult	8472	72.3	2948	81.0	2948	100.0
Insecure food with hunger	1186	10.1	502	13.8	405	13.8
Respondent - fair/poor health	4251	36.2	1445	39.7	1214	41.2
Child - fair/poor health	1562	12.2	609	17.9	551	19.8
Screening Outcomes						
Projected users ≥48-months	5411	46.2	1865	51.3	1608	54.6
TLG Observed	1190	10.2	1190	32.7	1060	35.9
TLG Correctly Predicted	605	11.2	605	32.4	553	34.4
Rate of Success	50.8		50.8		52.2	
False Positive	4806	88.8	1260	67.6	1055	65.6
False Negative	585	49.2	585	49.2	507	47.8

* Valid percentage (does not include cases with missing values); TLG= time limit group

Table 4 displays the change in size of the group targeted for screening if a) the entire 4th year weighted sample is used; and b) if clients with 24 or more months on KTAP are filtered out; and c) if a second filter is applied to select only the clients who have no second working adult in the household. The proportion of clients with at least 24 months on KTAP is 31% (N=3,638) of the 4th year panel weighted sample, out of which 81% (N=2,948) had no other working adult in the household. Although the overall rate of success does not improve drastically, the cost associated with the screening of 3,638 cases is clearly lower than the cost for screening 11,722 cases.

The screening of 2,948 cases yields further cost savings and identifies 1,608 cases or 54.6% that are predicted to remain on KTAP for 48 months or more. Administrative records on these cases show that in fact only 1,060 or 35.9% of the 2,948 cases actually reached the 48-month limit as of December 2001. Moreover, of the 1,060 cases, 553 or 34.4% were correctly predicted to use 48 months or more on KTAP. Thus, using the screening tool, we were able to identify many (52.2%) of all clients who actually reached the 48-month mark on KTAP.

Conclusion

Due to an overrepresentation of the moderate and high users of cash assistance in the panel study, the evaluation team was able to use statistical analyses to identify data patterns that set these two groups apart from the rest of the KTAP population. Their characteristics were further used to create a brief practical screening tool that can help case managers to identify the moderate KTAP users at risk of becoming high KTAP users. The intent is to provide the additional support these cases need as soon as possible, in order to help KTAP recipients become self-sufficient before reaching the KTAP time limit. This tool has the potential to preserve months of KTAP eligibility for clients with multiple risk factors, time that they might need at a later point in life. Furthermore, the tool has the potential to save federal funds that states could use to empower hard-to-serve clients through the provision of specialized case management services.

The results of the multivariate analyses showed that screening of cases at the 24-month point-in-time for the absence of another working adult in the family, for food insecurity with hunger, and for fair/poor health of the respondent and his/her children, would identify cases with a very high probability of reaching the time limit. To summarize, the following five steps should be carried out in order to successfully identify the clients at risk to reach the time limit:

1. Select all cases with 24 months or more of KTAP cash assistance utilization. From this group, further select only the cases without a second adult earner in the household.
2. Apply the screening tool that includes the food security scale *and* the measures of health status for the respondent and his or her children.
3. Refer to intensive case management (ICM) all cases with insecure food with hunger *and* with fair or poor health status for the respondents or their children.
4. Monitor and screen again, within six months, all cases with insecure food with hunger *or* fair or poor health status for the respondents or their children.
5. At 48 months, if a case is still active on KTAP, automatically refer it for ICM.

It is recommended that all of the active clients who use between 24 to 48 months of their lifetime limit be screened using this process. The screening tool proposed in this paper has a great potential to assist decision makers in the management of KTAP caseload.

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APPENDIX: SCREENING TOOL ITEMS

Number of Working Adults:

Do you work at any full-time jobs, 35 hours or more per week?   1. YES   2. NO   9. DK/NA

Do you work at any part-time jobs, less than 35 hours per week? 1. YES   2. NO   9. DK/NA

Do you work at any temporary, seasonal, or occasional odd jobs,
or other employment you have not mentioned yet?   1. YES   2. NO   9. DK/NA

Respondent's Health:

How would you describe your overall health?

1. Excellent   2. Good   3. Fair   4. Poor 9. DK/NA

Do you have any chronic illnesses?   1. YES   2. NO   9. DK/NA

Do you have any physical disabilities?   1. YES   2. NO   9. DK/NA

Do you have any mental disabilities?   1. YES   2. NO   9. DK/NA

Children's Health:

The following questions were asked each child (ex, child1, child2, etc.) in the household.

How would you describe the overall health of [CHILD1]?

1. Excellent   2. Good   3. Fair   4. Poor 9. DK/NA

Does [CHILD1] have any chronic illnesses?   1. YES   2. NO   9. DK/NA

Does [CHILD1] have any physical disabilities?   1. YES   2. NO   9. DK/NA

Does [CHILD1] have any mental disabilities?   1. YES   2. NO   9. DK/NA

Food Security Scale: The Food Security Core-Module Questionnaire of the U.S. Household Standard Food-Security/Hunger Survey Module can be downloaded from: http://www.fns.usda.gov/fsec/files/fsguide.pdf (Appendix A, pages 52 -57)