STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY

GEORGE DEUKMEJIAN, *Governor*

DEPARTMENT OF HEALTH SERVICES
714/744 P STREET
SACRAMENTO, CA 95814

July 1, 1988

TO: All County Welfare Directors
All County Administrative Officers

Letter No.: 88-43

SUBJECT: ANALYSIS OF THE MEDI-CAL QUALITY CONTROL DATA FOR THE OCTOBER 1986 - SEPTEMBER 1987 REVIEW YEAR

The purpose of this letter is to:

- Provide you with a preliminary analysis of the Quality Control (QC) data covering the October 1986 - September 1987 review year which was sent to all county welfare directors on April 15, 1988.
- Provide you with the results of a chi-square analysis of factors contributing to QC errors for the same period which was prepared by the QC Section
- Identify statewide error trends which will require corrective action
- Request your ideas in statewide corrective action planning

Analysis of Statewide Data

The statewide case error rate for the October 1986 - September 1987 review year was 8.49 percent, excluding liability overstated and state assumed errors. This represents an increase from the 6.79 percent for the previous review year, but remains at a very low level when compared to the high of 20.31 percent for the October 1981 - March 1982 period. The Trend Analysis Table (Attachment I) depicts the statewide case and regressed (federal) dollar error rates for the past twelve review periods. Remember that the regressed dollar error rates represent data from the federal sample only and always include those errors that are based on compliance issues as well as other errors.

Over fifty two percent of all case errors which occurred in the October 1986 - September 1987 review year were caused by the beneficiary. The program element which had the highest number of all case errors was Wages and Salaries (79 errors; 21.01 percent), which occurred primarily in aid codes 34 and 82. Most of these (63) were due to the failure of the beneficiary to report changes in earned income. This is an area which merits attention at both the county and state levels.

Other program elements with high case error rates due to the beneficiary were: 150 - Living Arrangements, occurring primarily in aid codes 13 and 34 (total 33 errors; 19 of which were beneficiary), 211 - Bank Accounts or Cash on Hand, primarily in aid code 13 (total 15 errors; 14 of which were beneficiary), 332 - Veterans Benefits, primarily in aid code 13 (total 15 errors; 10 of which were beneficiary), and 346 - Other Government Benefits, also in aid code 13 (29 errors; 18 of which were beneficiary caused). Development of a statewide corrective action initiative to reduce beneficiary errors in all elements is planned this year and should help decrease errors in these elements.

Most of the agency caused errors occurred in elements 185 - Blindness or Disability, all of which were in aid code 64 (12 errors; all due to the agency), element 186 - Other Categorical Relatedness, primarily in aid codes 34 and 86 (19 errors; 18 due to the agency), and 331 - RSDI, primarily in long-term care cases (45 errors; 29 due to the agency). At least six of the errors in element 186 were in cases with aid code 86 (Medically Indigent Pregnant Women - No Share of Cost) and were due to the agency's failure to discontinue the recipient timely after the birth of her child. Failure of the agency to take appropriate action after a change in the household composition was also a factor in the 14 agency errors which occurred in element 150 - Living Arrangements. Counties should be aware of this error trend and take steps to ensure that workers take appropriate action on reported changes. We also suggest that county staff review All County Welfare Directors (ACWD) Letter 87-62 covering this subject.

Errors in element 185 are usually due to the agency's failure to verify disability or blindness. These errors have the potential of resulting in very high misspent dollars. All counties should remind their staff to always verify disability or blindness per Title 22, California Code of Regulations, Section 50167 (a) (1) and ACWD Letter 87-47 to avoid such errors.

A further analysis of the causes of the errors in elements 186 and 331 is planned, and the results as well as any statewide corrective actions implemented will be shared with counties at a later date.

A comprehensive chi-squared error analysis (Attachment II) has been prepared by Quality Control for your review and consideration when analyzing individual county errors.

County Case Error Rates

In reviewing the statewide QC data for the review year, several county error patterns are apparent. Thirty-eight counties increased their case error rates from the previous year, nineteen counties decreased, and one county had no change. There were eighteen counties with a case error rate exceeding ten percent. Of those, five counties had error rates which exceeded fifteen percent. These data represent an increase in county error rates from the previous year (see Trend Analysis of Case Error Rates by County table

Attachment III). Staff from the Corrective Action Unit will work closely with those counties having problems to identify individual error trends and assist them in developing corrective actions.

County Corrective Action Plans

Welfare and Institutions Code, Section 14016 h requires that an individual county corrective action plan (CAP) be required from all counties which exceed a fifteen percent case error rate. This year there are five counties meeting that criteria. A county CAP must follow the format described in the Medi-Cal Corrective Action Handbook which was transmitted to all counties via ACWD Letter 85-63. Those counties required to complete a CAP have been individually notified by letter, and corrective action staff will be available to assist them in the development of their CAPs.

We hope this information has been helpful to counties in analyzing the QC data and identifying statewide and county specific error trends. We encourage counties with suggestions for statewide corrective actions to reduce the errors discussed in this letter to share their ideas with the corrective action liaison assigned to their county.

Sincerely,

Original signed by

Frank S. Martucci, Chief
Medi-Cal Eligibility Branch

Attachment

cc: Medi-Cal Liaisons
Medi-Cal Program Consultants

Expiration Date: June 30, 1989

TREND ANALYSIS

MEDI-CAL QUALITY CONTROL ERROR RATES

REVIEW PERIOD	Ineligible	U/S SOC	TOTAL MAO	AFDC	OVERALL	REGRESSION ERROR RATE (COMPLIANCE ISSUES INCLUDED: yes — HCFA)	REGRESSION ERROR RATE (COMPLIANCE ISSUES INCLUDED: no — STATE)
			PAYMENT ERROR RATES				
Apr87-Sep87			3.36%			NOT AVAILABLE	
Oct86-Mar87	1.22%	0.76%	1.98%	0.15%	1.31%	NOT AVAILABLE	
Apr86-Sep86	2.30%	0.30%	2.60%	0.19%	1.63%	6.5981%	2.0453%
Oct85-Mar86	1.19%	0.44%	1.63%	0.44%	1.14%	3.3992%	1.4735%
Apr85-Sep85	1.17%	0.42%	1.59%	0.33%	1.07%	3.0824%	XXXXX
Oct84-Mar85	1.92%	0.61%	2.53%	0.45%	1.63%	3.1500%	XXXXX
Apr84-Sep84	2.66%	0.67%	3.33%	0.03%	1.91%	5.4417%	XXXXX
Oct83-Mar84	3.46%	1.00%	4.46%	0.36%	2.66%	3.0255%	XXXXX
Apr83-Sep83	2.61%	0.76%	3.37%	0.01%	2.22%	4.3866%	XXXXX
Oct82-Mar83	0.72%	1.17%	1.89%	0.54%	1.28%	1.1151%	XXXXX
Apr82-Sep82	2.80%	2.69%	5.49%	0.03%	1.89%	6.0961%	XXXXX
Oct81-Mar82	2.24%	0.90%	3.14%	0.22%	1.04%	3.6957%	XXXXX

CASE ERROR RATES (excluding overstated liability errors)

	Ineligible	U/S SOC	TOTAL MAO	SAMPLE SIZE	TOTAL ERRORS	
Apr87-Sep87	2.58%	5.67%	8.25%	2169	179	
Oct86-Mar87	1.98%	6.72%	8.71%	2320	202	
Apr86-Sep86	2.16%	4.85%	7.01%	2495	175	
Oct85-Mar86	1.67%	4.90%	6.57%	2511	163	
Apr85-Sep85	3.89%	4.28%	8.17%	2595	212	
Oct84-Mar85	4.10%	3.95%	8.05%	2585	208	*
Apr84-Sep84	5.12%	3.18%	8.30%	976	81	
Oct83-Mar84	2.47%	6.06%	8.53%	973	83	
Apr83-Sep83	3.63%	5.05%	8.68%	910	79	
Oct82-Mar83	10.74%	3.89%	14.63%	875	128	
Apr82-Sep82	14.53%	5.27%	19.80%	1005	348	
Oct81-Mar82	15.14%	5.18%	20.31%	1024	208	

* FIRST PENALTY ASSESSMENT CONCEPT REVIEW PERIOD

ERROR RATE ANALYSIS

In order to identify characteristics of the errors, Chi-squared analysis was done on possible relationships between aid code, element code, nature code, responsibility, and initial findings. The Chi-squared test shows only the existence of a relationship, not the strength of any relationship. With this type of test, it is possible to identify factors that have a statistically significant relationship to error proneness, allowing a targeted approach to corrective action.

Once the existence of a relationship is identified, it is then necessary to analyze the relationship to determine why some instances have high error counts or amounts. To concentrate on only those instances where the actual frequency exceeds the expected frequency is to incorrectly presume that errors with fewer than the expected frequency are acceptable, regardless of magnitude. The objective of this analysis is to identify the overall relationships and then identify those instances that are error prone and therefore merit more frequent and/or intensive reviews.

ANALYSIS

The Chi-squared analysis indicates that there is a significant relationship between:

Element Code and Responsibility
Nature Code and Responsibility
Initial Findings and Responsibility
Aid Code and Existence of Errors

There was not a significant relationship between Aid Code and Responsibility.

AID CODES

The aid codes producing the greatest numbers of errors are 13 and 34. The next order of magnitude include 14, 63, 64 and 82.

For each of these aid codes, the following are the primary element and nature codes accounting for the errors. For reference, attached is a list of the descriptions of each of the element and nature codes.

Aid Code 13:

Element Code: 331, 346, 332 and 550.
Nature Code: 59, 37, 99 and 29.

Aid Code 34:

Element Code: 311, 150 and 184
Nature Code: 37, 39, 99, 7 and 22

Aid Code 82:

Element Code: 311
Nature Code: 37

Aid Code 64:

Element Code: 185
Nature Code: 27

Aid Code 14:

Element Code: 211, 311, 346
Nature Code: 99, 37, 29

RESPONSIBILITY

A review of the agency caused errors indicates that the higher incidence of errors occurs in element codes 185, 186, 331, 362 and 530. The nature codes having a higher incidence of agency caused error are 7, 27, 37, 38, and 99.

There is a higher incidence of agency caused error for cases resulting in a liability overstated, eligible with ineligible members, and ineligible errors. There is a major difference for eligible with ineligible members errors.

SUMMARY

This analysis has highlighted aid code, element code and nature codes that have high incidences of error. The above tests support the inference that the population of errors are concentrated in certain aid codes, element and nature codes. It is necessary to determine what makes the aid codes susceptible to error and why there is a high incidence of error associated with certain element codes and nature codes. With this information, counties can review their procedures and develop controls that will reduce or eliminate the errors.

ELEMENT AND NATURE CODES

Element

150 Living Arrangements and Household Composition

184 Unemployed Parent

185 Blindness/Disability Determination

211 Bank Account or Cash on Hand

311 Wages and Salaries

331 RSDI Benefits

332 Veterans Benefits

346 Other Unearned Income

550 Other State Medicaid Criteria

Nature

7 Ineligible Person(s) Included

22 Employed Full Time

27 Not Disabled During Review Month

29 Exceeds Prescribed Limits

37 Not Including Certain Income

39 Employment status changed from unemployed to employed

59 Unearned income increased

99 Other

DEPARTMENT OF HEALTH SERVICES
MEDI-CAL QUALITY CONTROL

TREND ANALYSIS OF
CASE ERROR RATES BY COUNTY

COUNTY	10/84-3/85	4/85-9/85	TWELVE MONTHS	10/85-3/86	4/86-9/86	TWELVE MONTHS	CHANGE BETWEEN YEARS	10/86-3/87	4/87-9/87	TWELVE MONTHS	CHANGE BETWEEN YEARS
ALAMEDA	7.35%	4.55%	5.97%	4.48%	3.03%	3.76%	-2.21%	14.81%	14.55%	14.68%	10.92%
ALPINE	33.33%	0.00%	14.29%	16.67%	12.50%	14.29%	0.00%	14.29%	16.67%	15.38%	1.09%
AMADOR	3.57%	7.14%	5.36%	10.71%	0.00%	5.56%	0.20%	8.00%	4.17%	6.12%	0.56%
BUTTE	2.56%	12.50%	7.59%	10.26%	2.63%	6.49%	-1.10%	18.92%	16.13%	17.65%	11.16%
CALAVERAS	3.57%	10.00%	8.62%	0.00%	13.04%	6.12%	-2.50%	11.54%	0.00%	6.52%	0.40%
COLUSA	0.00%	6.67%	3.57%	12.00%	3.85%	7.84%	4.27%	4.17%	0.00%	2.13%	-5.71%
CONTRA COSTA	6.67%	6.12%	6.38%	4.65%	6.52%	5.62%	-0.76%	2.27%	2.86%	2.53%	-3.09%
DEL NORTE	7.14%	3.70%	7.27%	4.17%	0.00%	2.00%	-5.27%	0.00%	13.04%	7.14%	5.14%
EL DORADO	10.34%	7.41%	8.93%	3.70%	0.00%	1.85%	-7.08%	4.17%	15.00%	9.09%	7.24%
FRESNO	8.82%	21.21%	15.67%	8.70%	9.09%	8.89%	-6.78%	11.29%	14.06%	12.70%	3.81%
GLENN	7.41%	22.22%	14.81%	7.41%	7.14%	7.27%	-7.54%	12.50%	8.33%	10.42%	3.15%
HUMBOLDT	5.26%	4.00%	4.55%	2.00%	2.22%	2.11%	-2.44%	0.00%	26.47%	13.64%	11.53%
IMPERIAL	1.89%	0.00%	1.05%	7.14%	6.52%	6.82%	5.77%	12.77%	4.65%	8.89%	2.07%
INYO	0.00%	3.45%	1.79%	0.00%	3.57%	2.04%	0.25%	0.00%	5.00%	2.50%	0.46%
KERN	2.04%	4.08%	3.06%	0.00%	3.85%	1.98%	-1.08%	2.08%	2.44%	2.25%	0.27%
KINGS	3.45%	0.00%	1.72%	3.57%	7.14%	5.36%	3.64%	0.00%	20.83%	14.29%	8.93%
LAKE	14.81%	0.00%	11.54%	3.33%	11.54%	7.27%	-4.27%	4.17%	25.00%	14.58%	7.31%
LASSEN	18.52%	14.29%	16.36%	7.69%	3.85%	5.77%	-10.59%	4.76%	7.69%	6.38%	0.61%
LOS ANGELES	15.03%	8.67%	10.97%	10.19%	9.77%	9.98%	-0.99%	11.91%	9.06%	10.46%	0.48%
MADERA	7.69%	7.89%	7.79%	5.00%	5.00%	5.00%	-2.79%	2.50%	8.82%	5.41%	0.41%
MARIN	5.26%	2.50%	3.85%	2.56%	2.44%	2.50%	-1.35%	4.88%	12.12%	8.11%	5.61%
MARIPOSA	11.50%	6.25%	9.52%	0.00%	15.79%	11.54%	2.02%	11.54%	0.00%	6.52%	-5.02%
MENDOCINO	10.81%	15.00%	12.99%	8.33%	18.18%	13.33%	0.34%	8.70%	4.17%	6.38%	-6.95%
MERCED	9.76%	13.16%	11.39%	2.70%	12.20%	7.69%	-3.70%	8.11%	18.52%	12.50%	4.81%
MODOC	11.54%	7.69%	9.62%	16.00%	13.64%	14.89%	5.27%	11.54%	18.18%	14.58%	-0.31%
MONO	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
MONTEREY	14.00%	13.46%	13.73%	10.42%	8.00%	9.18%	-4.55%	10.00%	8.89%	9.47%	0.29%
NAPA	3.57%	6.67%	5.17%	18.52%	12.00%	15.38%	10.21%	3.85%	12.00%	7.84%	-7.54%
NEVADA	7.14%	3.45%	5.26%	0.00%	7.69%	3.85%	-1.41%	8.11%	17.39%	14.58%	10.73%
ORANGE	1.43%	8.96%	6.57%	10.45%	4.84%	7.75%	1.18%	1.61%	5.00%	3.28%	-4.47%
PLACER	10.71%	7.41%	9.09%	3.70%	6.90%	5.36%	-3.73%	17.65%	13.79%	15.87%	10.51%
PLUMAS	3.70%	7.14%	5.45%	17.24%	3.85%	10.91%	5.46%	8.70%	0.00%	4.44%	-6.47%
RIVERSIDE	10.29%	7.04%	8.63%	6.06%	3.08%	4.58%	-4.05%	6.67%	8.00%	7.27%	2.69%
SACRAMENTO	5.97%	8.57%	7.30%	10.61%	9.52%	10.00%	2.78%	8.20%	5.00%	6.61%	-3.39%
SAN BENITO	3.33%	6.90%	5.08%	7.14%	7.41%	7.27%	2.19%	20.00%	21.74%	20.75%	13.48%
SAN BERNARDINO	8.70%	5.63%	7.14%	2.78%	13.43%	7.91%	0.77%	5.26%	3.77%	4.55%	-3.36%
SAN DIEGO	8.75%	3.70%	6.21%	5.95%	5.13%	5.56%	-0.65%	7.69%	4.23%	5.88%	0.32%
SAN FRANCISCO	5.71%	20.90%	13.14%	3.17%	8.62%	5.79%	-7.35%	28.57%	10.42%	20.19%	14.40%
SAN JOAQUIN	7.69%	5.88%	6.80%	5.77%	2.00%	3.96%	-2.84%	8.89%	2.08%	5.38%	1.42%

EXCLUDES OVERSTATED LIABILITY ERRORS and STATE ASSUMED ERRORS

DEPARTMENT OF HEALTH SERVICES
MEDI-CAL QUALITY CONTROL

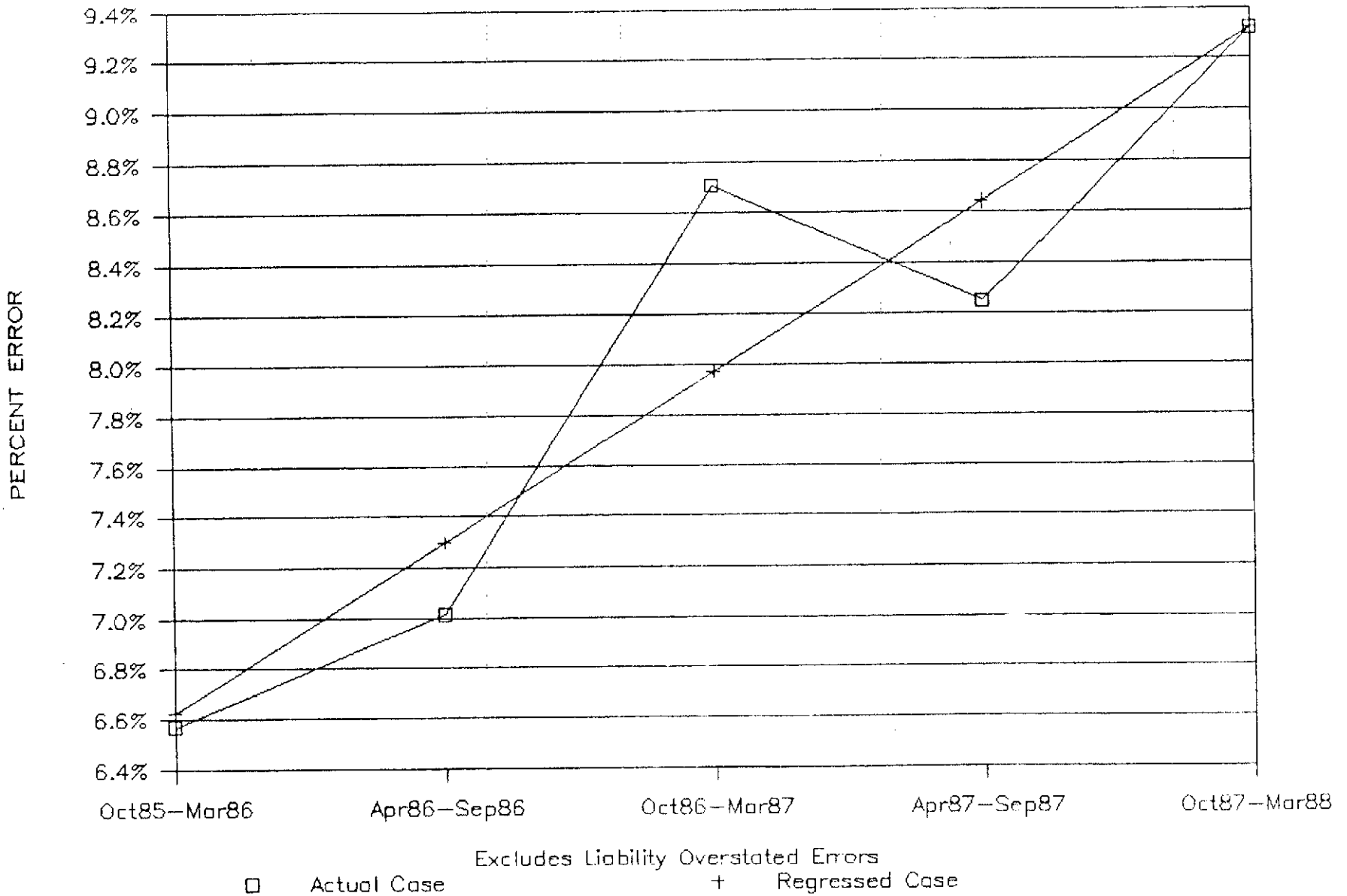
TREND ANALYSIS OF
CASE ERROR RATES BY COUNTY

COUNTY	10/84-3/85	4/85-9/85	TWELVE MONTHS	10/85-3/86	4/86-9/86	TWELVE MONTHS	CHANGE BETWEEN YEARS	10/86-3/87	4/87-9/87	TWELVE MONTHS	CHANGE BETWEEN YEARS
SAN LUIS OBISPO	5.26%	19.44%	12.16%	11.11%	4.88%	7.79%	-4.37%	13.16%	6.45%	10.14%	2.35%
SAN MATEO	7.69%	2.00%	4.90%	2.00%	12.77%	7.22%	2.32%	2.94%	9.68%	6.15%	-1.07%
SANTA BARBARA	6.12%	6.52%	6.32%	8.00%	8.51%	8.25%	1.93%	7.69%	6.06%	6.94%	-1.31%
SANTA CLARA	1.92%	1.96%	1.94%	1.89%	1.85%	1.87%	-0.07%	12.28%	10.71%	11.50%	9.63%
SANTA CRUZ	2.56%	7.69%	5.13%	5.26%	0.00%	2.63%	-2.50%	8.57%	0.00%	4.62%	1.99%
SHASTA	2.56%	8.11%	5.26%	2.63%	5.13%	3.98%	-1.36%	10.53%	15.15%	12.68%	8.70%
SIERRA	15.00%	13.64%	14.29%	7.14%	18.18%	12.00%	-2.29%	11.11%	0.00%	5.56%	-6.44%
SISKIYOU	6.90%	3.45%	5.17%	6.90%	0.00%	3.57%	-1.60%	12.00%	4.00%	8.00%	4.43%
SOLANO	9.76%	7.32%	8.54%	0.00%	2.63%	1.30%	-7.24%	0.00%	10.00%	4.62%	3.32%
SONOMA	0.00%	7.69%	3.88%	12.24%	9.62%	10.89%	7.01%	1.96%	2.17%	2.06%	-8.83%
STANISLAUS	3.77%	10.20%	6.86%	5.88%	7.84%	6.86%	0.00%	6.52%	0.00%	3.23%	-3.63%
SUTTER	6.67%	0.00%	3.51%	6.90%	3.57%	5.26%	1.75%	0.00%	0.00%	0.00%	-5.26%
TEHAMA	3.85%	7.14%	7.41%	12.00%	6.90%	9.26%	1.85%	3.45%	12.50%	7.55%	-1.71%
TRINITY	3.85%	0.00%	1.85%	0.00%	3.57%	1.82%	-0.03%	13.64%	0.00%	6.82%	5.00%
TULARE	1.89%	12.96%	7.48%	5.77%	16.00%	10.78%	3.30%	10.00%	9.80%	9.90%	-0.88%
TUOLUMNE	3.57%	3.33%	3.45%	3.70%	3.45%	3.57%	0.12%	3.85%	9.09%	6.25%	2.68%
VENTURA	11.32%	3.92%	7.69%	6.12%	6.52%	6.32%	-1.37%	8.51%	4.44%	6.52%	0.20%
YOLO	7.69%	7.32%	7.50%	0.00%	5.41%	2.60%	-4.90%	5.41%	3.45%	4.55%	1.95%
YUBA	10.34%	6.90%	8.62%	3.57%	6.90%	5.26%	-3.36%	3.70%	0.00%	1.89%	-3.37%
STATE	7.50%	7.94%	7.74%	6.49%	6.95%	6.72%	-1.02%	8.71%	8.25%	8.49%	1.77%

EXCLUDES OVERSTATED LIABILITY ERRORS and STATE ASSUMED ERRORS

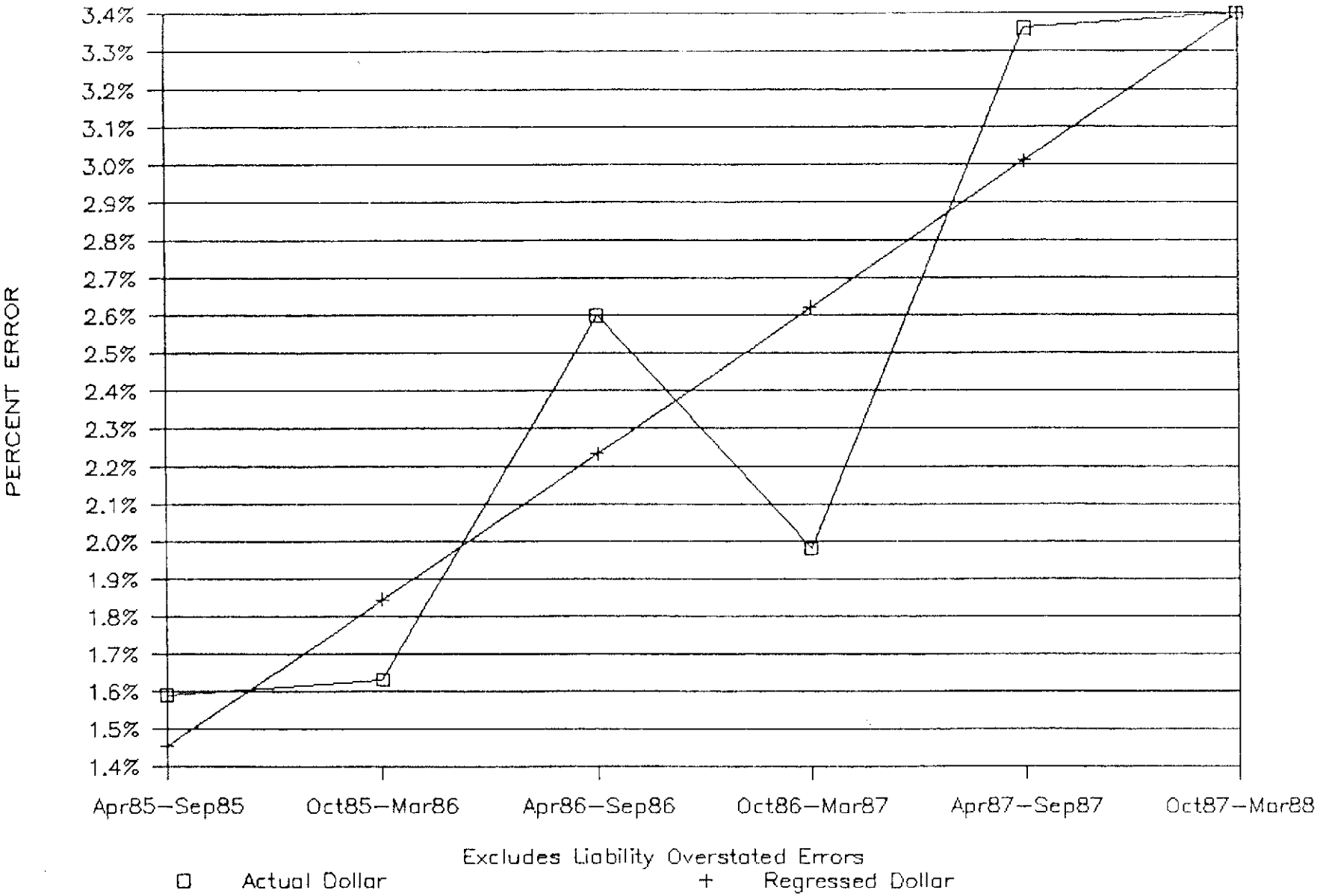
MEDI-CAL QUALITY CONTROL

LEAST-SQUARES ANALYSIS: CASE ERROR



MEDI-CAL QUALITY CONTROL

LEAST-SQUARES ANALYSIS: DOLLAR ERROR



STATE OF CALIFORNIA
MEDI-CAL QUALITY CONTROL
CORRECTIVE ACTION ANALYSIS

ELEMENT	AGENCY	CLIENT	TOTAL	PERCENT AGENCY	E1,1	E1,2	X1,1	X1,2	X^2
110	4	2	6	66.67%	3	3	0.333333	0.333333	0.666666
120	0	1	1	0.00%	0.5	0.5	0.5	0.5	1
130	9	0	9	100.00%	4.5	4.5	4.5	4.5	9
140	2	8	10	20.00%	5	5	1.8	1.8	3.6
150	14	21	35	40.00%	17.5	17.5	0.7	0.7	1.4
182	3	0	3	100.00%	1.5	1.5	1.5	1.5	3
183	2	2	4	50.00%	2	2	0	0	0
184	8	5	13	61.54%	6.5	6.5	0.346153	0.346153	0.692307
185	12	0	12	100.00%	6	6	6	6	12
186	19	1	20	95.00%	10	10	8.1	8.1	16.2
211	1	14	15	6.67%	7.5	7.5	5.633333	5.633333	11.26666
213	0	1	1	0.00%	0.5	0.5	0.5	0.5	1
221	2	2	4	50.00%	2	2	0	0	0
223	3	0	3	100.00%	1.5	1.5	1.5	1.5	3
224	1	0	1	100.00%	0.5	0.5	0.5	0.5	1
225	0	3	3	0.00%	1.5	1.5	1.5	1.5	3
311	17	64	81	20.99%	40.5	40.5	13.63580	13.63580	27.27160
312	1	1	2	50.00%	1	1	0	0	0
331	41	24	65	63.08%	32.5	32.5	2.223076	2.223076	4.446153
332	7	10	17	41.18%	8.5	8.5	0.264705	0.264705	0.529411
334	2	2	4	50.00%	2	2	0	0	0
336	4	10	14	28.57%	7	7	1.285714	1.285714	2.571428
342	2	0	2	100.00%	1	1	1	1	2
346	12	22	34	35.29%	17	17	1.470588	1.470588	2.941176
362	10	2	12	83.33%	6	6	2.666666	2.666666	5.333333
365	1	2	3	33.33%	1.5	1.5	0.166666	0.166666	0.333333
371	11	5	16	68.75%	8	8	1.125	1.125	2.25
372	11	10	21	52.38%	10.5	10.5	0.023809	0.023809	0.047619
520	2	0	2	100.00%	1	1	1	1	2
530	11	0	11	100.00%	5.5	5.5	5.5	5.5	11
550	5	5	10	50.00%	5	5	0	0	0
TOTAL	217	217	434	50.00%					
AVERAGE				56.99%					

X^2	127.5497
CRITICAL VALUE	48.52

If the X^2 (Chi-Squared) value is greater than the critical value there is a 95% confidence level that that the element code is related to the source of the error.

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CHI-SQUARED TEST: AID CODE

AID CODE	ERROR	NO ERROR	TOTAL	PERCENT ERROR	E1,1	E1,2	X1,1	X1,2	X^2
13	162	836	998	16.23%	98.30645	899.6935	41.26756	4.509166	45.77672
14	25	348	373	6.70%	36.74179	336.2582	3.752393	0.410011	4.162404
16	3	108	111	2.70%	10.93388	100.0661	5.757013	0.629049	6.386062
17	3	23	26	11.54%	2.561090	23.43890	0.075[illegible]6	0.008218	0.083437
23	0	4	4	0.00%	0.394013	3.605986	0.394013	0.043052	0.437066
24	1	1	2	50.00%	0.197006	1.802993	3.272970	0.357626	3.630597
26	0	1	1	0.00%	0.098503	0.901496	0.098503	0.010763	0.109266
30	0	1	1	0.00%	0.098503	0.901496	0.098503	0.010763	0.109266
34	111	1250	1361	8.16%	134.0632	1226.936	3.967618	0.433528	4.401147
37	0	9	9	0.00%	0.886531	8.113468	0.886531	0.096868	0.983399
38	10	122	132	7.58%	13.00245	118.9975	0.693311	0.075755	0.769066
39	6	136	142	4.23%	13.98749	128.0125	4.561219	0.498358	5.059608
54	0	3	3	0.00%	0.295510	2.704489	0.295510	0.032289	0.327799
59	0	5	5	0.00%	0.492517	4.507482	0.492517	0.053815	0.546333
63	28	146	174	16.09%	17.13960	156.8603	6.881620	0.751931	7.633551
64	29	221	250	11.60%	24.62586	225.3741	0.776949	0.084894	0.861844
66	2	37	39	5.13%	3.841635	35.15836	0.882858	0.096466	0.979325
67	2	9	11	18.18%	1.083538	9.916461	0.775148	0.084697	0.859845
82	39	638	677	5.76%	66.68684	610.3131	11.49494	1.256013	12.75095
83	2	3	5	40.00%	0.492517	4.507482	4.614059	0.504162	5.118221
86	15	37	52	28.85%	5.122180	46.87781	19.04878	2.081396	21.13018
40	3	98	101	2.97%	9.948849	91.05115	4.853476	0.530322	5.383799
TOTAL	441	4036	4477	9.85%					
AVERAGE				10.71%					
COUNT	22								

X^2	127.4999
CRITICAL VALUE	33.92

If the X^2 (Chi-Squared) value is greater than the critical value there is a 95% confidence level that that the aid code is related to the source of the error.

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CHI-SQUARED TEST: AID CODE

AID CODE	AGENCY	CLIENT	TOTAL	PERCENT AGENCY	E1,1	E1,2	X1,1	X1,2	X^2
13	83	79	162	51.23%	80.06466	81.93533	0.107615	0.105158	0.212773
14	12	13	25	48.00%	12.35565	12.64434	0.010237	0.010003	0.020241
16	1	2	3	33.33%	1.482678	1.517321	0.157133	0.153546	0.310680
17	1	2	3	33.33%	1.482678	1.517321	0.157133	0.153546	0.310680
24	1	0	1	100.00%	0.494226	0.505773	0.517590	0.505773	1.023364
34	46	62	108	42.59%	53.37644	54.62355	1.019399	0.996125	2.015524
38	9	1	10	90.00%	4.942263	5.057736	3.331515	3.255453	6.586969
39	4	2	6	66.67%	2.965357	3.034642	0.360996	0.352754	0.713751
63	17	11	28	60.71%	13.83833	14.16166	0.722349	0.705857	1.428206
64	17	12	29	58.62%	14.33256	14.66743	0.496437	0.485102	0.981540
66	1	1	2	50.00%	0.988452	1.011547	0.000134	0.000131	0.000266
67	0	2	2	0.00%	0.988452	1.011547	0.988452	0.965885	1.954337
82	11	27	38	28.95%	18.78060	19.21939	3.223418	3.149824	6.373243
83	1	0	1	100.00%	0.494226	0.505773	0.517590	0.505773	1.023364
86	10	5	15	66.67%	7.413394	7.586605	0.902491	0.881886	1.784378

TOTAL	214	219	433	49.42%		
AVERAGE				55.34%		
COUNT	15					
					X^2	24.73932
					CRITICAL VALUE	26.119

If the X^2 (Chi-Squared) value is greater than the critical value there is a 95% confidence level that that the aid code is related to the source of the error.

STATE OF CALIFORNIA
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CHI-SQUARED TEST: INITIAL FINDING

INITIAL FINDING	AGENCY	CLIENT	TOTAL	PERCENT AGENCY	E1,1	E1,2	X1,1	X1,2	X^2
2	109	154	263	41.44%	131.1990	131.8009	3.756118	3.738967	7.495086
3	34	21	55	61.82%	27.43707	27.56292	1.569848	1.562679	3.132528
4	38	27	65	58.46%	32.42562	32.57437	0.958303	0.953928	1.912232
5	28	7	35	80.00%	17.45995	17.54004	6.362/vo	6.333653	12.69635
6	9	8	17	52.94%	8.480549	8.519450	0.031817	0.031672	0.063489
7	0	2	2	0.00%	0.997711	1.002288	0.997711	0.993155	1.990867
TOTAL	218	219	437	49.89%					
AVERAGE				49.11%					
COUNT	6								

X^2	27.29056
CRITICAL VALUE	11.07

If the X^2 (Chi-Squared) value is greater than the critical value there is a 95% confidence level that that initial findings is related to the source of the error.

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NATURE	AGENCY	CLIENT	TOTAL	PERCENT AGENCY	E1,1	E1,2	X1,1	X1,2	X^2
1	4	0	4	100.00%	2	2	2	2	4
2	0	1	1	0.00%	0.5	0.5	0.5	0.5	1
3	0	1	1	0.00%	0.5	0.5	0.5	0.5	1
7	20	17	37	54.05%	18.5	18.5	0.121621	0.121621	0.243243
9	2	8	10	20.00%	5	5	1.8	1.8	3.6
12	3	1	4	75.00%	2	2	0.5	0.5	1
22	8	5	13	61.54%	6.5	6.5	0.346153	0.346153	0.692307
27	12	0	12	100.00%	6	6	6	6	12
29	7	16	23	30.43%	11.5	11.5	1.760869	1.760869	3.521739
30	1	2	3	33.33%	1.5	1.5	0.166666	0.166666	0.333333
36	0	1	1	0.00%	0.5	0.5	0.5	0.5	1
37	49	43	92	53.26%	46	46	0.195652	0.195652	0.391304
38	10	7	17	58.82%	8.5	8.5	0.264705	0.264705	0.529411
39	1	22	23	4.35%	11.5	11.5	9.586956	9.586956	19.17391
41	0	19	19	0.00%	9.5	9.5	9.5	9.5	19
42	4	2	6	66.67%	3	3	0.333333	0.333333	0.666666
43	1	0	1	100.00%	0.5	0.5	0.5	0.5	1
47	0	1	1	0.00%	0.5	0.5	0.5	0.5	1
52	1	2	3	33.33%	1.5	1.5	0.166666	0.166666	0.333333
53	8	2	10	80.00%	5	5	1.8	1.8	3.6
59	17	36	53	32.08%	26.5	26.5	3.405660	3.405660	6.811320
77	2	0	2	100.00%	1	1	1	1	2
83	6	0	6	100.00%	3	3	3	3	6
84	1	0	1	100.00%	0.5	0.5	0.5	0.5	1
99	57	28	85	67.06%	42.5	42.5	4.947058	4.947058	9.894117
TOTAL	214	214	428	50.00%					
AVERAGE				50.80%					
COUNT	25								

X^2	99.79069
CRITICAL VALUE	40.11

If the X^2 (Chi-Squared) value is greater than the critical value there is a 95% confidence level that that the nature code is related to the source of the error.