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David G. Reeve

VALUE ENGINEERING PHILOSOPHY APPLIED
TO A YOUTH SERVICE BUREAU PROGRAM,
JUVENILE COURT FOR THE COUNTY OF OAKLAND, MICHIGAN

David G. Reeve P.E., C.Eng., CVS
Value Manager - Applications
Chrysler Corporation

ABSTRACT

Value Engineering philosophy was utilized as the basis for evaluation in a Study and Analysis of the Process-Efficiency of the Youth Service Bureau Program, in Oakland County, Michigan. The objective of this paper is to present a summary of that analysis, the recommendations offered to the Youth Service Bureau and the current status relative to the implementation of these recommendations.

The study was part of an overall analysis of the Youth Service Bureau being conducted under a Federal Government grant. The study period was for calendar year 1974; with the final report submitted to the Youth Service Bureau in March, 1976.

The overall scope of the evaluation was to analyze the Cost-Benefits and Time-Management of the Oakland County Youth Assistance Program (OCYA) based on a census of the total youth served, total project costs, including Federal and matching funds and time usage of the OCYA Staff.

INTRODUCTION

In the management of an organization, such as OCYA, the problems encountered are most often of a highly abstract nature and difficult to define. The Value Engineering philosophy of function analysis offered methods that were adaptable to systems management, enabling both strengths and weaknesses to be clearly defined, and the inter-relationship within the organizations to be determined, so that specific steps could be taken to further improve and strengthen the thrust of the overall effort of the OCYA toward the prevention of juvenile delinquency and neglect.

The procedure followed was to develop supporting data on the OCYA programs and processes and to apply function analysis by means of FAST diagrams to isolate poor value functions. The FAST diagram was developed in co-operation with a task force team of several Detroit Chapter SAVE members for personal use by the author in his cost effectiveness analysis. FAST diagrams, Cost-Benefit and Time-Efficiency analyses were generated as a basis for comparison. This was the Evaluation Model.

Two task forces comprised of OCYA Staff and members of OCYA related activities were utilized in applying the scientific disciplines of Value Engineering to two parallel studies for comparison with the Evaluation Model.

The complete study provides a model of the application of the technique to a human service enterprise.

EVALUATION SUMMARY

The following summarized text considers only the findings of the Evaluation Model.

1. WORK FLOW DIAGRAMS:

Two work-flow diagrams were developed to graphically illustrate the tasks performed by the OCYA Staff in primary prevention/administration and rehabilitation. The two diagrams permitted an in-depth review of the sequency of events that lead to the delivery of casework services to the client and community organization programs.

Primary Prevention: A Work-Flow Survey was carried out by reviewing the responsibilities and duties of each member of the staff involved in Primary Prevention. This entailed reviewing job descriptions, having the staff list what they considered to be their duties and holding personal discussions. The results of the survey were then translated into the Prevention Management Work-Flow Diagram, which indicated the inter-relationships between tasks and the work-flow pattern, including the administrative aspect of OCYA.

Rehabilitation: In the preparation of the Work-Flow Diagram for Rehabilitation Management, discussions were held with the Assistant Director and the three Field Staff Supervisors on the sequence, and inter-relationship of tasks performed by the various members of the staff in the management of a typical rehabilitation case. The Diagram was reviewed in detail for validity by the field staff members of Task Forces I and II.

It was from these diagrams that the functions performed by the OCYA Staff were determined for development of the FAST diagrams, and a questionnaire developed for an Expended Time Survey.

2. EXPENDED TIME SURVEY AND DISTRIBUTION OF STAFF TIME:

The results of the Expended Time Survey indicated that the average hours expended per four week period by each OCYA professional staff worker was 193 hours. This compares with 150 hours for a standard four-week period (37.5 hours per week x 4 weeks). The hours per four-week period expended

by the thirty-two (32) professional staff totaled 6,182 hours, or the equivalent of a staff of forty-one (41) persons working 150 hours per four week period.

The data obtained from the survey was utilized in calculating the unit costs for rehabilitation and primary prevention also in the development of the Expanded Time Distribution Charts and the Cost-Function Analysis.

The breakdown by percentage of staff time expended in rehabilitation (family-centered casework services) as compared to prevention (community organization programs - camping, youth, employment, etc.) are detailed in Charts I through IV, in the Appendix.

3. NUMBERS OF CLIENTS SERVED - 1974:

The total number of clients serviced in rehabilitation (casework services) was 4,413 and in prevention (community-action projects - summer camp-parent education, etc.) was 7,894, indicating that 79% more persons were serviced in prevention than rehabilitation for an expenditure of only 40% of the total hours.

4. DISTRIBUTION OF REHABILITATION CASES:

The twenty-five (25) school districts of Oakland County are divided into twenty (20) districts or areas, each area being served by one field worker, with the exception of one area in which two workers served. The distribution, by area, of drop-in and referred cases serviced, ranged from a low of 3% to a high of 6.4%. The distribution of the percentage ranges and the number of workers within each range were as follows:

<u>% of Total Cases Served</u>	<u>Number of Fieldworkers</u>
3.0 - 3.9	6
4.0 - 4.9	6
5.0 - 5.9	5
6.0+	4

There are a number of possible reasons for the wide distribution of percentages. The three major reasons appear to be field worker motivation, lack of community resources, and density of population. A possible source for conflict would appear to center around the duality of the services performed by the field workers, i.e., Prevention and Rehabilitation (i.e., casework and community organization).

5. RECIDIVISM RATES:

Although clients served through professional casework services have increased from 4,000 in 1973 to over 4,400 for 1974, the program has been able to maintain an 85% success rate. Under 15% of youths served by Youth Assistance casework services have subsequent contact with the Juvenile Court.

6. TREND FIGURES:

Based upon the latest trend figures available from the Juvenile Court and OCYA (1974), Oakland County has a lower percentage of delinquency cases to Child Population Figures, than that of the total State and total U.S. Child Populations. The 1974 figures indicate that the percentage in Oakland County was 0.81%, the State 1.28% and the U.S. 3.43%. The trend has been this way for the 1966-1972 reporting period.

7. OPERATING COSTS:

The OCYA Program operating costs for 1974 were approximately \$814,000. The funds were provided by a number of agencies. The following is a breakdown by agency and by percentage of funds contributed.

County of Oakland	51.4%
Federal - LEAA Grant	13.2%
State of Michigan	1.3%
Local Municipalities & School Districts	18.9%
Citizen Members of Local YA Programs (Community fund raising)	7.5%
Private Foundations	7.6%
	<u>100.0%</u>

8. UNIT COST - COMPARISON:

It was found that the average time expended per client in rehabilitation was 15.9 hours and in prevention 6.04 hours, with a monetary unit cost of \$6.90 per hour per individual staff member. This computes to a cost of approximately \$110.00 per client in rehabilitation and \$41.00 in prevention. Thus, if a delinquent youth (or youth in danger of becoming delinquent), is diverted from the Juvenile Justice System and serviced by the Youth Assistance Program, through family-centered casework services, the total cost to the Oakland County taxpayer is approximately \$110.00 per child.

If the child was not diverted to Youth Assistance and had to be handled on Official Court Probation, the cost to Oakland County taxpayers per child would be over \$525.00.

If the child was to be institutionalized at Maxey Boys Training School, Michigan or similar institution, the yearly cost to the taxpayer is over \$17,000.00.

9. COST-FUNCTION ANALYSIS:

The results of the Cost-Function Analysis are that, in both Prevention and Rehabilitation, a redistribution of time expended in carrying out a number of tasks in the performance of certain functions should be carried out.

In Prevention, it was considered possible to redistribute approximately 0.19 hours per citizen

served (3.1%) in order to provide time for the collection of statistical data on the numbers of participants in the various prevention type programs. The hours required to accomplish this task to be drawn primarily from the secretary's time at the field offices.

In Rehabilitation, 0.86 hours per client would be redistributed, providing an additional 0.46 hours per client (2.9%) in direct client contact by the field worker and 0.40 hours per client (2.5%) in other directly related client activities. The hours required to accomplish these tasks would be from the Miscellaneous and Other, Secretarial, Travel and various Administration categories.

The distribution of hours expended, as indicated by the Cost-Function Analysis showed that the amount of time that could be redistributed is small, which implies that the hours expended per client/citizen are near minimum. Therefore, reduction in the total time expended per client/citizen does not appear to be feasible, as this would result in a reduction in the quality and/or number of persons serviced.

The values calculated for unit time spent in the two areas of service, i.e., 15.9 hours and 6.04 hours, were based on weighted averages; however, in reality each would be skewed reflecting the numbers of written referrals vs drop-ins and the programs such as summer camp, youth employment, etc. Due to lack of definition in the data obtained, this could not be indicated with any accuracy.

10. REPORTING PROCEDURES:

It was found that information was difficult to obtain in a number of areas, basically because of the limitations of the existing reporting procedures, or the absence of necessary procedures. The major problem areas were in budget reporting by the twenty-five local YA Committee Programs, detailed breakdown on the numbers of youth and adults that received prevention services, and detail on recidivism rates in the area of rehabilitation (casework services).

RECOMMENDATIONS

The following is a summarization of the recommendations submitted for consideration:

1. Utilize the Function Analysis System Technique diagram as an effective management tool to critically review, on a continuing basis, the following aspects of the OCYA Program (see Appendix).
 - a. The functions of the program to determine if changes have occurred or are necessary.
 - b. The existing staff component to ensure that all functions are adequately covered.
 - c. The staff assignments to ensure that the ob-

jectives of the functions are successfully achieved.

- d. Alternate methodologies to those currently employed in order to improve service delivery to client.
2. Develop standardized budget reporting system.
3. Based upon Cost-Function Analysis, evaluate current office procedures at both Central and Field Offices, retraining, records duplication, computerization of reporting procedures, frequency and duration of meetings, relativity of statistical information reports to current structure and methods of operation, case close-out reviews, etc.
4. Review Intake Office workload at Central Offices, as all written referred cases (2459) from the twenty-five school districts plus all Central Office drop-in cases were reviewed or interviewed by the Intake Worker.
5. Consider revising the dual role of the Fieldworker, to the role of either Caseworker or Community Organization Worker, and the ramifications of such a revision to the OCYA Program.

Implementation: Several of the recommendations relative to reporting and office procedures have been approved and are being implemented. All other recommendations are under review. The appointing of a Value Control task force to investigate the dual role of the Fieldworker relative to a casework and community organization, is currently being considered, in order to determine if reorganization would further improve and strengthen the thrust of the overall effort of the OCYA.

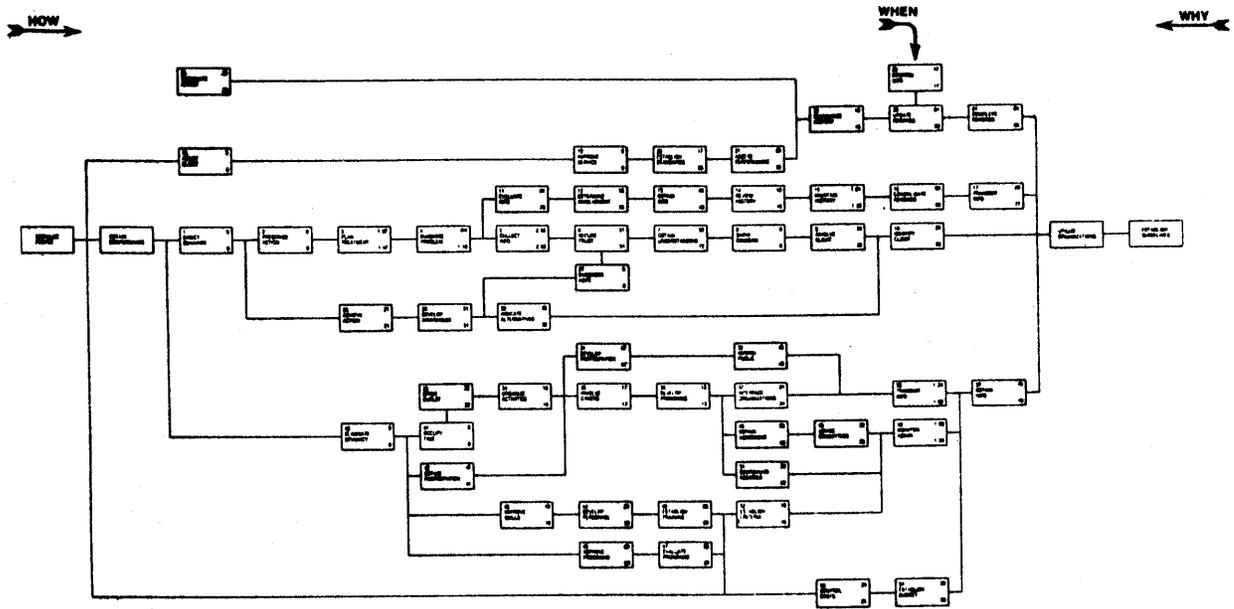
Reporting: In May, 1976, final draft copies of the complete study and analysis were presented to the Federal & State Governments, and final draft copies of the analysis complete with recommendations presented to the Probate Court Justices of Oakland County.

BIOGRAPHY

David G. Reeve-Value Manager-Applications, Chrysler Corporation is a graduate in Mechanical and Marine Engineering from London, England and holds a Master of Science degree in Management from Oakland University, Michigan. He is a Registered Professional Engineer (Michigan), a Certified Value Specialist, a Chartered Professional Engineer (U.K.), and is a Member of the Registre Europeen Des Professions Techniques Superieures (Europe).

He has acted as consultant to the Juvenile Court, Oakland County, Michigan since February 1975, utilizing Value Control techniques in a unique and effective manner to a human service enterprise. Mr. Reeve is a Fellow of the Institute of Marine Engineers and Member of the Institution of Mechanical Engineers (U.K.). He was awarded the SAVE, Inc. Student Award (1975-76).

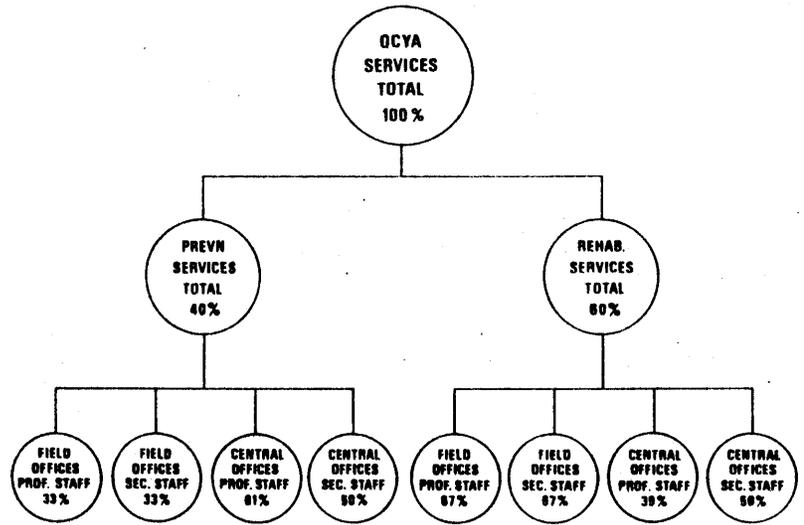
FAST DIAGRAM
 OAKLAND COUNTY YOUTH ASSISTANCE PROGRAM
 EVALUATION MODEL



TIME-EFFICIENCY

CHART I

OCYA PROGRAM DISTRIBUTION OF TIME
 EXPENDED IN 1974



The above chart illustrates the distribution of time expended by percentage, of the various staff groups in the fields of rehabilitation and prevention.

A detailed study of each group indicated in Chart I above has been illustrated in following Charts II thru IV.

CHART II

OCYA SERVICES TOTAL DISTRIBUTION
OF TIME EXPENDED IN 1974

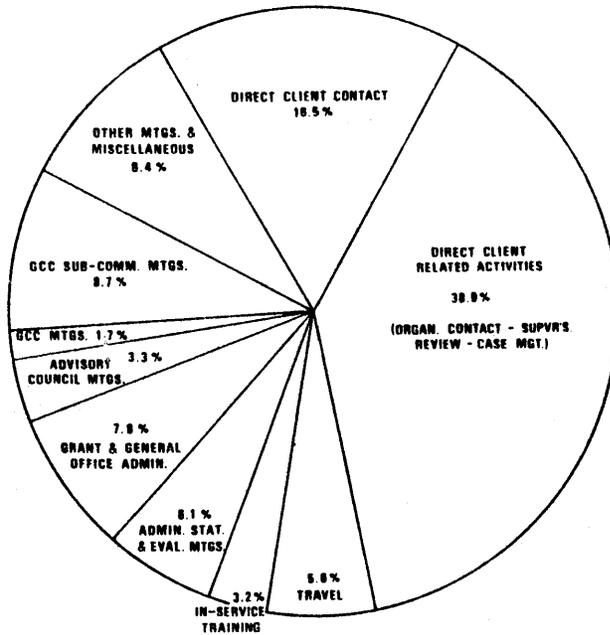


CHART III

PREVENTION & REHABILITATION SERVICES
DISTRIBUTION-TOTAL STAFF

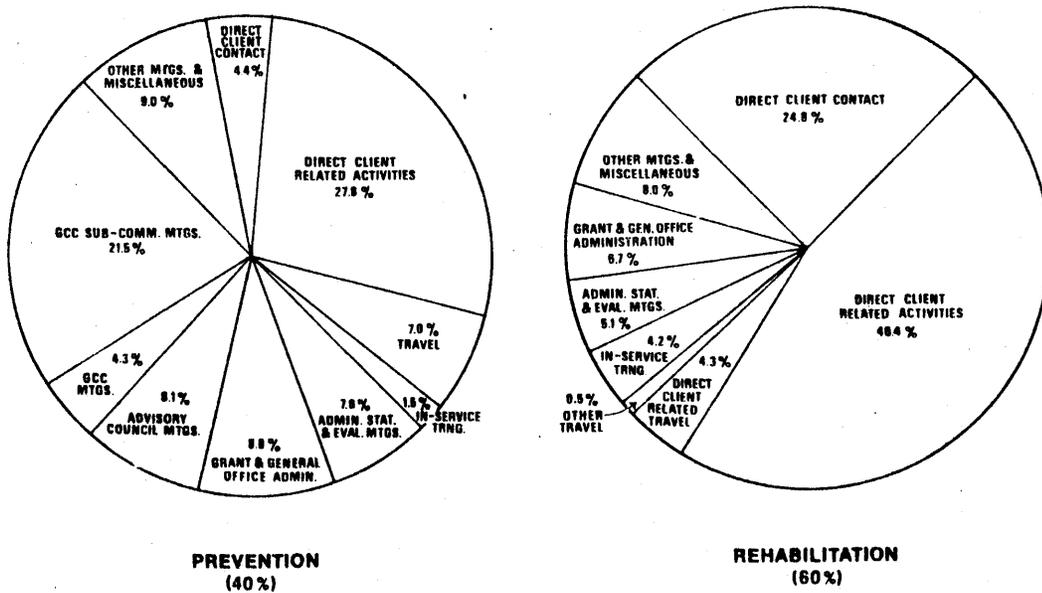


CHART IX (a)

PREVENTION SERVICES DISTRIBUTION BY STAFF GROUPS

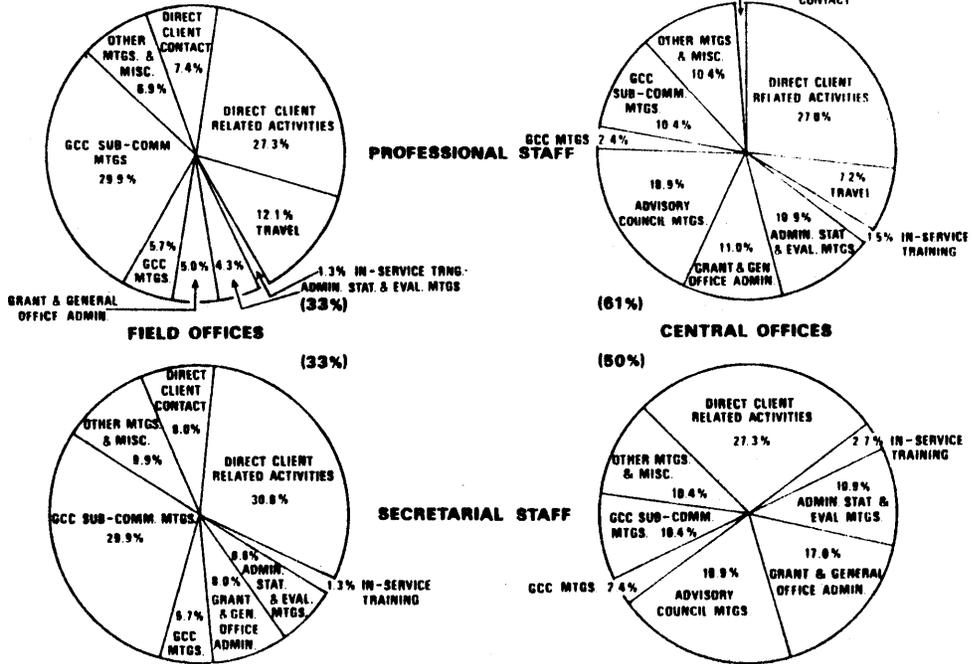


CHART IX (b)

REHABILITATION SERVICES DISTRIBUTION BY STAFF GROUPS

