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THE DEVELOPMENT OF A JUVENILE JUSTICE AND YOUTH SERVICES INFORMATION SYSTEM IN THE REAL WORLD

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One of the greatest obstacles to the nation's progress in the field of delinquency prevention and the problems of neglected children has been the absence of valid and reliable information concerning (1) client characteristics, (2) systematic aggregate data related to their behavior before, during and after treatment, and (3) the effects of measures taken to improve their environment and increase their chances of adjustment.

To supply this basic need for accurate, timely and complete quantitative information concerning delinquent and neglected children; state, county and local law enforcement, juvenile justice and youth services program administrators must seriously consider the development of a juvenile justice information system. This system is designed to identify problems and provide specific facts for youth program planning, development and operation. This recommendation is primarily motivated by the recognition that youth needs programs of better quality directed more specifically to their needs.

It is important to point out in this context that special efforts must be taken in the development of a youth information system for juvenile offenders and neglected children. A strict security and confidentiality structure must be maintained during the planning and developmental phases so that these individual rights can be strictly observed and enforced. In this way, a juvenile justice information system which is intended to serve youth will not be distorted in its use to jeopardize the rights of youth on whom information is collected.

Planning a juvenile justice and youth services information system means considering the mechanization of information services for juvenile offenders and neglected children receiving any type of formal regular attention from state, county or local youth serving programs, juvenile courts and law enforcement agencies. The term mechanization incorporates computerizing selected statistical data and juvenile program information. Included in the planning for the system should be the standardi-

zation of reporting requirements for state, county and local agencies; the preparation of usual oriented statistical records; the creation of a controlled access communication system with procedure for handling intra-state, and eventually inter-state, sharing of information on children and youth on a "need to know" basis. The scope of the plan should also include the conceptual and operational development of a program evaluation and research information capability within the agencies responsible for education, identification, law enforcement, adjudication, treatment and delivery of protective services to delinquent and neglected children.

This paper will describe the problems which necessitate the development of juvenile justice and youth services information systems and a realistic approach to begin planning detailed design and operation of such a system.

The need for the use of common sense on the part of program administrators who contemplate the planning and development of a juvenile justice and youth services information system cannot be overstressed. This paper will attempt to explain not only what a finished system should look like and what factors should be considered in its development, but more importantly, how to go about realistically establishing communications, gaining understanding, and putting the juvenile justice and youth services information system together in a rational, sensible manner which will not overwhelm the potential user of the system and which will make realistic demands of the programs and agencies which must supply the input.

NATURE OF THE PROBLEM AND NEEDS TO BE MET

Information is perhaps a human service organization's single most important resource in attempting to achieve its goals. Without the proper information, in the proper form, at the proper time, it is impossible for any agency to determine how to serve its clients, set goals for itself, or determine how well it is doing.

The "information problem" is more important today than ever. Decisions tend to affect more children, and the effects of a poor decision may be

so costly -- in both dollars and human terms -- as to be irreversible. Add to this the fact that, usually, a complicated network of organizations is involved with each child, and the urgency of the need for vastly improved information systems is dramatically illustrated.

This paper describes a plan to address this problem at the state level. Here, in capsule form, is the nature of the problem.

Although most states have an extensive network of youth serving organizations, currently there exists only a partial basis for making coordinated and comprehensive efforts at meeting the needs of children and youth. A youth services information system must have the long range goal of providing a statewide system for collecting, processing and disseminating information needed for the delivery, evaluation and improvement of youth services.

THE PROBLEM

The problems statement is presented in two parts. The first part explains the problem in terms of impact on the clientele of the youth services network. The second focuses on specific information-oriented problems.

A. Youth in Need of Service

The problem can be understood properly only in the context of your state's youth services system. There usually exists an intricate network of organizations, governmental and private, all of which perform functions related to the entry, processing, treatment and discharge from the youth services system. The quality of the actions of any one of these organizations has a critical effect on the success or failure of each youth with whom the agency comes in contact.

Furthermore, the quality of the relationships among these youth services organizations has just as critical an effect. Inadequate management of inter-organizational relationships results in uncoordinated and fragmented service efforts, premature closure of services, overlapping services and other malfunctions. Unfortunately, the detrimental effects are borne primarily by the youth that the system is intended to help. Not only does the system often fail to help, it may do more harm than good to its youthful clients.

Perhaps the single most important factor in service delivery is information. Unless good information is available for clients and program administrators, adequate service, evaluation, program management and research are impossible.

In the final analysis, then, the problem which

this paper addresses is that of how the youth service network provides SERVICE TO YOUTH. For purposes of this discussion, "service" is defined as the matching of available resources to clients' needs in such a manner that the need is adequately met. A number of problems exist which prevent the occurrence of service at the local, regional, state (and national) levels. Here are the major ones on which the system is expected to have significant impact.

1. Availability of Service Resources

Two distinct aspects of "availability" are worthy of consideration because of their relevance to helping children and youth and their relationship to the need for adequate information.

The first aspect of availability concerns the extent to which the pattern of resource allocation within the youth services system reflects the actual needs and priorities of children and youth. Crucial policy makers at all levels lack information required for those decisions. For example, although there is general agreement on the desirability of delinquency prevention, there is very little information to indicate the point at which intervention in a community would have the desired effect, or which type of service resources should be applied. The system, by collecting information on contacts between youth and youth-related organizations, will supply information needed to make decisions on program priorities.

Secondly, the extent to which the service resources are accessible to the youth is very important. Three factors have a major influence on this:

- (a) *Agency policy and mandate* determine what kinds of services are available to what kinds of youth.
- (b) *Interagency communication and exchange of information* affect how integrated the services will be. The continuum of services may have many gaps in it with the result that cases are "lost" in those gaps or that needed services are prematurely terminated.
- (c) *The degree of community awareness* that services are available and how they may be obtained affects the accessibility. The system would provide client-oriented information needed to identify and correct inadequate accessibility of services to youth.

2. The Level and Quality of Services

In addition to the problem of availability of services, problems due in part to the inadequacy of information exist at the point of service provision.

Case plans are not made in accord with the best professional practice. Often case dispositions are made more out of habit and pragmatic considerations rather than out of the review of adequate information on similar cases.

Related to this is "resource location by shopping." That is, since information on service resources is only partial and inconsistent, there is no systematic way of securing services for a case at hand. The result is service tokenism, regardless of the intent of the agency.

Another problem has to do with how the agencies define functions, procedures and philosophies. The primary factor in making case dispositions, is often the agency's self-concept rather than the youths' needs and the likelihood that the treatment placement will provide the required services. Information on the last two factors is needed by organizations if the youth is to benefit.

Treatment planning, both in institutional and community settings is hampered by the lack of statistics related to success/failure rates, based on client characteristics and effects of services delivered. Best guesses and

professional convention must be relied upon in the absence of valid and reliable evaluative data.

The situation can be summed up by the phrase "service discrepancy." That is, youth who need services the most are the least likely to receive them at the appropriate time; the services which are provided represent, as often as not, a *mismatch* of resources to needs.

Although provision of the proper statistics and case feedback in an efficient manner will not completely remedy the situation, it will substantially enhance the increase of service and, conversely, reduce service discrepancy. It will do this by providing, in many instances for the first time, the information necessary for functional decision makers at all levels. And that, in general terms, is the goal of a youth services information system.

B. Services in Need of Information

The first section presented the problem in terms of how inadequate information affects the youth client population and the youth service system. This section will discuss the problem in terms of the quality and utility of the information itself. First, the problems are described in overview form. Then a detailed breakdown is given.

1. Many Facts, Little Information

A great deal of time is used for collecting, processing, storing and retrieving information. Only a limited amount of it is accessible or relevant for use. Most of the data concerns case records; little is available for administrative planning evaluation and research purposes, especially on an interagency basis.

2. Lack of Uniform Processing Procedures

There are a variety of methods of collecting and generating information. As a result, information is often inaccurate, untimely, unreliable and in irregular supply. This is true not only of behavioral science type data, but also of basic population reporting.

3. Lack of Provision for Adequate Administrative Monitoring

Administrators frequently have to rely on either their own observations or on sketchy information of questionable quality. This makes it virtually impossible to assess the progress of a program and to adjust the program during operation. This problem exists in virtually all youth programs.

4. Lack of Standard Program Information on Which to Base Program Evaluation and Comparative Evaluation Among Agencies

There currently exist no standardized forms, definitions of terms or procedures for interagency information collection, handling and dissemination.

Information relevant to ongoing service/treatment is generated from many dispersed sources and in a way which prohibits systematic and meaningful collection of the data for use in service/treatment.

Information on the clients after termination of jurisdiction is important for program evaluation and improvement. This information and legal guidelines for its collection and use are lacking.

These problems may be organized under three pertinent categories of information: (1) information on client characteristics and the delivery of services, (2) information on organi-

zational performance, and (3) information on inter-organizational relationships.

1. Problems Related to Information on Client Characteristics and Delivery of Services

- (a) There is no uniform way of collecting basic biographical and diagnostic information on youth when they first come in contact with the law enforcement, judicial, or youth services system.
- (b) There are no uniform, statewide procedures and standards for making dispositional or placement decisions.
- (c) The method of collecting and using information about the client in the program is inadequate.
- (d) There is no agreement on what information should be collected on youth, how it should be used, or by whom.
- (e) There is a dearth of information on total client characteristics (and projections of same for future possible populations) which allows the organization to evaluate the scope and content of its major programs.
- (f) There is very little systematic follow-up information on the youths once they return to the community.
- (g) There is considerable fragmentation of services and uncoordinated proliferation of services which cannot be documented in quantitative terms.

2. Problems Related to Information on Organizational Performance

- (a) There are severe limits on comparative evaluation of program performance, both among youth services programs and between youth services programs and those of state and local law enforcement and juvenile justice programs.
- (b) Evaluation of programs for both efficiency and effectiveness must rely on information which, when available at all, is of questionable reliability.
- (c) The planning of major programs is hindered by the inability to assess the current scope and effect of the existing programs on the youth population.
- (d) There is a flood of facts, but a deficit of information.
- (e) The procedures for processing information are inadequate, resulting in information which is too late, partial, or of varying reliability.
- (f) There is little accessible information on the availability of service resources for use by law enforcement and judicial officials or social services staff.
- (g) Duplication of collection by multiple collections of the same item of information is frequent and extends to most organizations.
- (h) There is a lack of capability to utilize information well due to both the nature of the existing information and the lack of adequate procedures for interpretation utilization.

3. Problems Related to Information on Interorganizational Relationships

- (a) Standards and procedures are lacking for interjurisdictional sharing of terms, definitions and information; this need is currently critical.
- (b) Record sharing is hindered by the lack of standardization of formats.
- (c) There is considerable redundancy in information collection, storage and use among youth serving agencies in different jurisdictional areas.
- (d) There is no comprehensive, statewide system for collecting and sharing information on youth and youth services through the use of summary statistics.

- (e) Many cases are "lost" between agencies because of lack of a uniform identification method.
- (f) Standards of confidentiality for sharing client information are lacking; there is no statewide code of ethics.

The problems and the anticipated impact of a youth services information system on them can best be described using a system model.

The youth services delivery system is an adaptive system and the success of an information system depends on its ability to support such better service delivery. Since the "adaptive system" concept is crucial for determining the functions of the system and since systems related terminology is not uniform and consistent, the "adaptive system" is succinctly explained in Figure I.

The essential features of the youth service delivery system, as an adaptive system, are that the system receives inputs (youth, dollars, resources, etc.), acts upon them in some way (e.g., matches resources to youth needs), and produces an output (a rehabilitated youth). The process is controlled by feedback about the results of the organizations' operations and about the impact of programs on the clients. A change in one agency within the system affects the operations of other agencies in some way.

Thus, for example, a juvenile court may decide that one of its programs is not effective and begins a different one. (i.e., feedback has led to a program change.) As a result youth with certain kinds of characteristics will not be committed to the state. As the youth clients' makeup changes, the state will have to make changes in its programs. This in turn will affect the jobs of police officers, courts, other agencies, etc. In short, because of a change in one part of a system, the entire system, over time, has to adapt to a new set of conditions. Figure I shows the points in the youth services delivery system where information will help the system adapt in a manner that will make that adaptation one which is of optimum benefit for the youth clientele.

SETTING APPROPRIATE PRIORITIES FOR THE DEVELOPMENT OF A JUVENILE JUSTICE AND YOUTH SERVICES INFORMATION SYSTEM AT THE STATE LEVEL

Communicating a basic understanding of the problem showing where a youth services information system can help is a critical antecedent to planning for the development of such a system.

Equally important in the early planning stages is the establishment of an agreed upon priority for the development of a new information system to serve juvenile delinquents and neglected children and youth. A juvenile justice and youth services information system does not have to be sold as a concept. It rather must be explained in a way which is understandable to the people with responsibility for setting priorities and establishing funding programs needed to support such a system's development effort on an inter-disciplinary basis.

It is not difficult to see that the basic goal of such a youth services information system is to ultimately prevent delinquency. This includes both prevention of future delinquency on the part of those youths who have been adjudicated delinquent and the prevention of delinquency on the part of youth who are "potentially delinquent."

For analytical purposes this basic goal has been broken down into eight sub-goals:

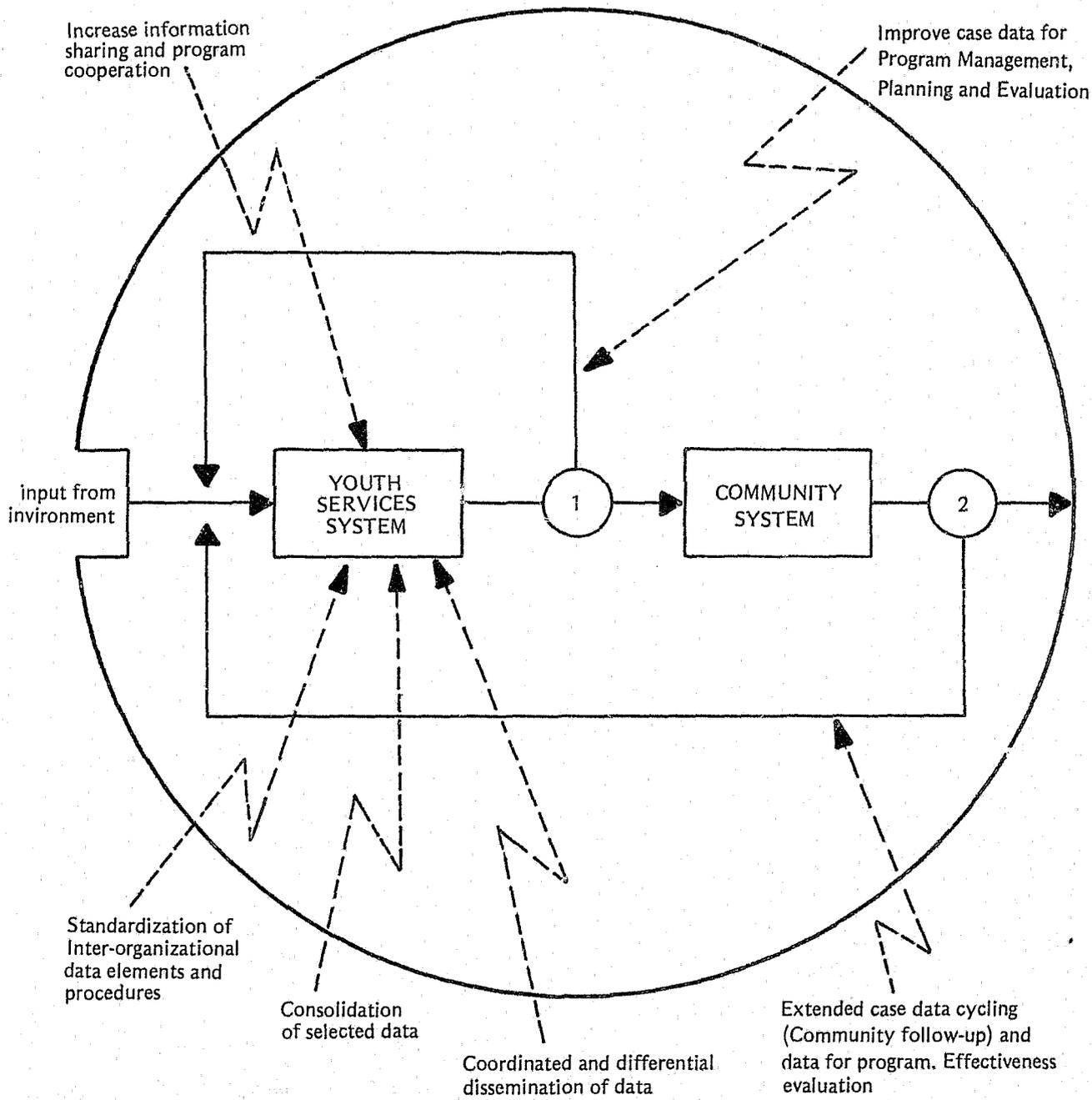
1. To identify and prevent potentially delinquent behavior.
2. To provide community alternatives to arrest and to official court processing of apprehended juveniles.
3. To provide alternatives to the institutionalization of adjudicated youth.
4. To implement new programs and expand existing programs in the community and in institutions which will prepare resident youth for reentry to their normal life style.
5. To mobilize local communities and existing educational, vocational and employment facilities to aid youth returning from state custody and care.
6. To improve the effectiveness of existing juvenile law enforcement, juvenile justice and youth services facilities and to provide for the creation of needed community-based resources.
7. To increase the skill and effectiveness of juvenile law enforcement, adjudication and youth services staff.
8. To identify and coordinate existing and potential public and private financial resources for the prevention and control of juvenile delinquency based on relevant facts related to the success and failure of existing programs and the needs for future expansion and or resources development.

In determining the relative priorities of development of a juvenile justice and youth service information system the benefits of such a system for its function and the persons to be served by it should be carefully assessed.

Some examples of the benefits which will be provided to participating agencies by such a system are:

Benefits for Youth

A responsible, efficient system of information should allow for the provision of effective treatment and at the same time protect youth from being lost or abused by the juvenile justice law enforcement or youth services delivery system. A juvenile justice and youth services information system will also provide for the rights of youth to



MAJOR BENIFITS IN RELATION TO YOUTH SERVICES SYSTEM

FIGURE I

public accountability and will result in more juvenile officer and social worker time being spent directly in delivery of services to clients. The youth information system will eventually allow for the collection of standardized interdepartment and inter-agency information extending over the entire law enforcement, juvenile justice and youth services process at the state level. In addition to benefiting each participating agency, the disruption currently caused in many instances by a lack of inter-agency communication should be minimized. With the youth services information system, accurate measurement of processing time and numbers of juveniles served will also be achieved. Meaningful program management reports for individual agencies and a summary of jurisdictional results will also be made possible.

Most important, the plan to develop a juvenile justice and youth services information system will create a concrete product which will stimulate long range financial support after the information systems capabilities have been developed, designed and demonstrated.

One caution should be considered: In its early stages of operation the benefits cited above will not be as dramatic or visible as those of a medium sized response system, such as an accounting system or production management system within a single department. The advantages of a total "juvenile justice and youth services process" coverage must still be demonstrated and the local acceptance of the concept stimulated through such a demonstration. In a long run, however, direct pay-off from the operating system will become most evident to the user agencies who must be eventually counted on for their financial and political support. Therefore, the planning process is the critical period, and should be supported directly by funds from outside the user agencies particularly at the county and local level. Once the system begins to operate funding priorities may shift to accommodate direct payment by the user group for the use of the information system.

This shift will occur principally because of agency response to awareness of how well they are doing to meet their established objectives. Consequently, delinquent and neglected children and youth will begin to receive direct benefits from the programs.

BENEFITS FOR STATE AND LOCAL LAW ENFORCEMENT

A juvenile justice and youth services information system will provide police with access to case

police history information. This will allow for improved decision making for the child at the first discretionary stage of the official process.

An information system will allow police access to listings of available placement and services resources which can be used to divert juveniles from official police processing whenever appropriate.

Information will be available on the relative success of direct agency referrals and other alternatives to arrest. This information may help to determine the future policies and procedures for their local law enforcement agencies.

Information will improve enforcement capabilities through the analysis of patterns of juvenile offenses, police contacts, and apprehensions. Aggregate data available on police contact trends with juveniles by precinct area can facilitate the determination of manpower allocation and policy adjustments to deal effectively with the juvenile population on a "neighborhood" basis.

Case history availability will provide a reduction in administrative time and expense required to maintain juvenile records.

Case reference information will provide a direct source as to possible whereabouts of juveniles (hold orders).

BENEFITS TO THE PROSECUTION FUNCTION

The availability of uniform information resources for attorneys will be useful in preparing petitions for juvenile courts and recommending alternatives to formal court processing. Available information on police case histories will aid prosecutors in decision to prosecute, release or seek a waiver to an adult court where advisable.

BENEFITS TO JUVENILE COURTS

A uniform information resource for data and case history information will provide valuable assistance in preparing pre-sentence reports and recommendations prior to initial hearings and formal proceedings.

Uniform statistics will increase the probability of success on dispositions and placement decisions based on accurate quickly available information on how similar children and youth responded to treatment in a similar situation.

The availability of a data base will provide the capability to evaluate and predict measures of probation success and failure.

Access to current information on individual children's involvement with other official agencies will allow probation officers and juvenile court workers to adjust treatment and supervision needs.

Statistical information on the types of clients being handled by the court will give direction to staff training in order to facilitate better staff-client matching and subsequent caseload adjustments.

Resource information on existing placement alternatives will reveal gaps in available services and offer direction for program development at the state, county and local levels where new services are actually needed to fill those gaps.

BENEFITS TO STATE SOCIAL SERVICES AND YOUTH SERVICES DEPARTMENTS

Computerized information will: Provide fast, easily accessible management information on the entire spectrum of state level programs for delinquent and neglected children operated out of the major state department.

Provide the capability to update information used to monitor behavioral progress of individual youth and to detect any inappropriate delays or interruptions in the treatment process.

Provide data for systematic evaluation of programs, policies and personnel in relation to the performance and achievements of treatment goals based on reasonable expectancies which can be established on a statewide basis.

Provide increased access to, and awareness of placement alternatives within state programs as bedspace occurs or new program alternatives are developed.

Provide information on trends and commitments which will indicate target areas for prevention programs and point out immediate needs for increased treatment resources.

Create a data base on which to develop predictive measures of success in different treatment programs leading to the validation of a delinquent classification system which is flexible and can accommodate program changes.

Provide aggregate statistical information on a statewide basis to facilitate long and mid-range planning efforts using quantitative resources as a basis for judgments.

Develop (in cooperation with law enforcement and the juvenile courts) information surveys on patterns of child neglect which might indicate targets for prevention and intervention at the community level.

Provide "case record abstract" information for review by parole and review boards and case-workers in order to facilitate systematic evaluation of individual children's progress toward systematically derived goals.

Develop a data and sampling base which will encourage the cooperation of major universities to conduct research conducive to program modifications, evaluation and innovation.

Create the capability to update continually previously gathered social history and diagnostic information on individual children and youth in order to prevent duplications and wasted time on the part of line staff hired to provide direct services.

Review the decision making criteria currently in use in an attempt to revise decision making patterns in line with the functional needs of the delinquent and neglected youth population. Through the use of this decision making, data treatment teams and program administrators may begin to understand emerging patterns of adjustment in order to make intelligent and timely case changes or program modifications during the course of an individual treatment or group treatment process.

BENEFITS FOR PRIVATE AND PUBLIC YOUTH SERVING AGENCIES

A youth services information system will provide for direct tie-in and statistical compatibility with the total youth services network so that even the smallest agency can review its client outcomes in relation to statewide reasonable expectancies.

Use of a common data storage base will:

Provide access to information on case history involvement with other agencies, plus previous treatment and social histories for individual children and youth which will avoid duplication of information gatherings and foster more appropriate handling of private agencies' current treatment responsibilities.

Create a statewide data base for private agency reference on the types of clients who need services and the gaps in these services. This data base for private agency use will give emphasis to the development of programs to meet clients' needs and to fill gaps in the existing services network.

Provide comparative data to serve as a basis for coordination among private agencies with similar goals and objectives.

Provide agency directors with information on their agencies' effectiveness in dealing with different types of clients which they have been licensed to serve.

BENEFITS TO STATE LEGISLATIVE AND GOVERNMENTAL BODIES

The development of a juvenile justice and youth services information system will provide an effective

tive, comprehensive, and complete information resource to allow for an increased level of high quality facts and figures. This will enable the individual state to discharge its responsibility and more fully provide for the needs of its youth.

The availability of data with complete statistical compatibility across traditional agency lines and jurisdictions will provide comparative information to generate budget reports and justify expenditures based on the actual need for services within the total juvenile justice and youth services network at the state level. At the same time, this same comparative data will reflect changing trends and individualize local needs which exist in metropolitan and rural areas since the data will be based on the actual movement and flow of cases through the law enforcement adjudicative and youth services process.

THE OBJECTIVES OF A JUVENILE JUSTICE AND YOUTH SERVICES INFORMATION SYSTEM

Any planning effort geared to the development of a juvenile justice and youth services information system at the state level should investigate the feasibility and possibility of computerizing juvenile case record information and aggregate statistical data. The scope of the plan should include: establishing standardized reporting formats for state, county and local education, law enforcement, adjudication and youth services agencies and programs; the preparation of "user-oriented" statistical records; the definition of information reporting criteria; the development of criteria for a controlled access communications plan with guidelines for handling intra-state sharing of information on delinquent and neglected children and youth; and the development of a "code of ethics" establishing security policies for the use of the information system.

The plan should also establish detailed guidelines for the development of a program evaluation and research generating capability within the agencies involved in the program.

The information systems plan should be part of a total effort divided into four or five phases, each of which should be successfully completed and approved by a statewide system applications advisory group before the next phase is undertaken. Only the first phase (the planning phase) should be undertaken initially. The continuation into subsequent phases should be based entirely on the capability of producing a plan which has statewide

acceptance and is feasible to implement on a test basis.

Examples of how to phase the development of a juvenile justice and youth services information system are listed here:

- Phase 1: The presentation of an information systems plan for approval to a statewide applications advisory group.
- Phase 2: After approval by an advisory group, the performance by a detailed prototype systems design based upon the plan including the development, testing and demonstration of that design.
- Phase 3: The implementation of a prototype system in four to six counties throughout the state.
- Phase 4: The expansion of this prototype system after successful demonstration and evaluation to 15 additional counties.
- Phase 5: The installation of a tested system in the remaining counties throughout the state.

The advisory group should continue to function throughout each phase of the project to guarantee continuity, and support the fiscal obligations necessary for development and installation of a statewide system.

SPECIFIC OBJECTIVES

Since the entire development of a statewide system is based pragmatically on the successful completion of a comprehensive systems plan the remainder of this paper will deal with the specific objectives to be covered in that plan.

The information systems plan must delineate current and planned operating program relationships among youth services network functions in the state. It is recommended that a minimum of the following functions be included in the initial planning effort: education, juvenile law enforcement, juvenile courts, treatment and youth services programs at the state, county and local levels.

The plan should describe in a conceptual context the information system design and its use by these functions of the youth services network. The plan must include a description of information requirements for each function that is cited above and a description of systems performance requirements which will meet the needs of each individual function. The plan must furnish a statement of criteria which would outline the requirements for the use of a common information base by the functions cited above.

A separate chapter of the plan should be devoted to describing the relationship of any proposed juvenile justice and youth services information system to the major budgeting and data processing systems plans which are currently operating at the state level. The information and performance requirements for the youth informa-

tion system would be developed in a manner which will provide for the direct use of data elements contained in the youth information system to provide information requirements for these budgeting and management information systems.

The following is a detailed explanation of specific objectives which should be addressed by any state developing a youth services information systems plan.

1. Determine specific information requirements in relation to the decision making processes which currently operate in the law enforcement, juvenile justice and youth service network.
2. Determine how the youth services information system performance requirements will relate to the total state budget and/or management information system and data processing plan if one exists.
3. Describe and document systems performance requirements and general parameters and constraints which will affect the detailed systems design to take place during Phase 2.
4. Establish guidelines which describe how systematic evaluation of overall program efficiency within individual law enforcement, juvenile justice and youth services programs can be provided by the availability of data on juvenile offenders' and neglected children's movement through the decision points of the youth service system. Examples of these decision points include:
 - the decision to arrest and/or to prosecute;
 - dispositional decisions in the juvenile courts;
 - the decision to place on probation;
 - placement decisions by a state department of social services or a youth service;
 - institutional treatment patterns and the daily case events which occur during the individual ward's treatment;
 - the decision to release or discharge from the youth services system.

An analysis of decision points such as the above must be fully discussed in the information systems plan and documented in terms of related information requirements and how the proposed system would perform to make needed facts available to the users. This documentation as a minimum should include major decision points within each function showing complete alternatives for decision making at each decision point together with the information which is used to make each decision.

5. Establish guidelines for processing juvenile justice and youth services statistics based on accumulation of individual case event transactions which occur at decision points as delinquent offenders and neglected children move through the system toward eventual release or discharge into their respective communities.
6. Provide information to the advisory group which will enable them to determine whether an inter-disciplinary statewide juvenile justice and youth services information system has sufficient value and utility in relation to providing more effective services to youth, to justify the expense of statewide development, implementations and maintenance of such a system.
7. Explore the suitability of your state potentially using an automated limited access data file and describe how systems security can be achieved on this file as it is entered, maintained and updated on an inter-agency basis within the functions of a youth services delivery network.
8. Work directly with the systems user groups at state, county and local levels to determine which data elements should be contained within the information file of each program or function.

After completing all of these specific objectives the plan should recommend a set of standardized data elements to be drawn from the master files of each function for use on an inter-disciplinary basis. These standardized data elements in a common data base will constitute a portion of the information requirements from each function. They will represent data to be used by inter-agency personnel within a law enforcement, juvenile justice and youth services system for the purposes of tracking and processing individual cases and providing adequate treatment based on the information contained in the master files.

The systems plan must also set forth what data elements for each function which are outside of the common data base will be shared by each respective program or program function involved in the youth information system project. Access to these data elements outside of the common data base will be a major task to be determined by the advisory group.

THE END PRODUCT DESIRED AS A RESULT OF THE PLANNING EFFORT

The information systems plan to develop a juvenile justice and youth services information system should enable state, county and local educators; law enforcement juvenile officers and administrators, county prosecutors, juvenile court judges, court administrators and probation officers, Department of Social Services and Youth Services agency staff, and private agency program administrators to make direct use of documentation for the purposes of detailed design.

The plan should provide a separate chapter or section for each function of the state youth services system:

- A. Which describes the existing information systems operation and information requirements.
- B. Which provides a determination of standardized information requirements and record formats for each of the functions and programs of the juvenile justice and youth services network.
- C. Which provides the determination of system performance requirements including the allowance for inter-agency exchange of data elements and aggregate statistics derived from case record abstracts.
- D. Which provides the state with the necessary documentation needed to develop the detailed systems design configurations including recommendations for implementing and maintaining a limited access case record file.
- E. Which describes the guidelines for a security and confidentiality system which will provide safeguards for individual's records contained in the system and protect the rights of children and youth.
- F. Which describes the development of a transaction based statistical information resource and a program evaluation capability.

THE TYPES OF DATA TO BE CONSIDERED IN THE DEVELOPMENT OF A JUVENILE JUSTICE AND YOUTH SERVICES INFORMATION SYSTEM

Two types of data should be reviewed for inclusion in the systems plan: A. Individual identifiers and client characteristics; B. Case event data which occurs as children and youth move through the functions of the law enforcement adjudicative and youth service network.

THE IDENTIFIERS AND CLIENT CHARACTERISTICS

These information elements track the movement of delinquent and neglected children and youth through the network of services for youth. They are static in the sense that they do not change during the course of the process, nor are they generated by the operation of the individual agency involved with the case. These data elements are recorded as initially reported and the only corrections to the original entry will result when errors are detected in the master file.

THE CASE EVENT DATA

This type of information provides progress data created by the agencies that handle or process cases on an individual basis as youth move from agency to agency or are involved with a single agency. In this sense these data elements are dynamic since they constitute what may be referred to as "subject in process" or "case incident reporting."

TYPES OF DATA

These data elements related to the detailed series of defined events which occur within the juvenile protection law enforcement, adjudicative, treatment and community services facilities must be recorded routinely as children and youth move through the decision points within each functional process.

Each record in the data base should reflect the history and current status of the neglected child or juvenile offender as long as he or she is within the network of services. Each record should also be updated as he or she moves through the process from the original record of contact and positive identification to a point of exit from the network.

As aggregate data, the total file should reflect at any time a dynamic inventory of the youth services network. This aggregate statistical file should be used to study any aspect of the youth network or for management information to evaluate the effec-

tiveness of any individual or group of services components.

SECURITY AND PROTECTION OF INDIVIDUAL CASE RECORD INFORMATION

A separate chapter or volume of any planning process for juvenile justice or youth services information system must describe a method to pre-test and evaluate the success of a "security-privacy" juvenile history records procedure, and a method to develop guidelines for the state to use potentially such a "security-privacy" procedure.

This documentation must outline a dependable proven method for controlling access to information stored in automated data centers. (It may be advisable to indicate the stipulation that access to any particular piece of information must be limited to legitimate users of the information based on a predetermined set of entry requirements agreed upon by an inter-disciplinary group composed of systems users and administrative personnel representing every local, county and statewide access point.)

The security plan should also describe how a "limited access criteria" could be translated into an automated set of determinants describing who can be given what information.

OTHER IMPORTANT AREAS TO BE COVERED IN AN INFORMATION SYSTEMS PLAN FOR JUVENILE JUSTICE AND YOUTH SERVICES

The plan should describe how workable standards for a statewide record numbering system compatible with adult law enforcement, courts and corrections systems can be developed to minimize the need for many separate client case numbers. This description should take into account all existing systems now operating at the state level in the following areas:

1. law enforcement
2. education
3. social services
4. criminal justice
5. corrections
6. youth services
7. metropolitan data centers

The plan should outline methods which create the capacity for intra-state record conversion storage and recovery of client case history abstracts between and among target programs and agencies. In this section particular emphasis should be given to record conversion in the counties used to demonstrate the first operation of the juvenile justice and youth services system.

The plan should discuss in detail a proposal to conduct a special analysis in order to identify and eliminate duplicate or redundant records which would interfere with efficient management of a statewide juvenile justice and youth services data base.

It may be important to involve university personnel in developing a description of how an analytical model could be used to provide the analysis of behavioral data and test the reliability of the information identified as necessary to make individual client placement and treatment decisions throughout the youth services network.

An important aspect of detailed systems planning which will be necessary to gain support and acceptance of a new information system at the state level is a discussion of the process to be used to insure that current operating information systems which may already handle portions of the youth services data requirements are included in the plan, and will be integrated into the development of the new system. This description should include a description of how the people who now run the existing systems would be involved in the planning and detailed design process. Needless to say, this should be worked out in advance of its publication in a systems plan.

THE MAIN THEME OF THE PLAN – STANDARDIZED JUVENILE RECORDS AND STATISTICS

Blended throughout the entire juvenile justice and youth services systems plan should be the detailed description of how the information needs analysis would be conducted within and among the functional areas of the network. As mentioned earlier in this paper this description must include the development of inter-departmental and inter-agency integrated records in a form capable of producing complete juvenile justice and youth services network wide statistics from the case record abstracts. These statistics should be designed for direct use by administrative personnel and as a research base. The discussion should also include detailed plans to create one standardized set of data elements with uniform definitions for each data element. These standardized data elements would be used as a basic requirement for inter-agency master files and as a point of departure for beginning to describe agreements to share information across traditional jurisdictional lines.

The plans should also describe methods to be used to establish individual sub-files for each function of the juvenile justice and youth services net-

work described in the plan. These sub-files must also be standardized within each discipline or function. Once again standardization means the development of uniform definitions for each data element (development of these definitions is an area which has been virtually untouched in the juvenile justice and youth services domain.)

ORGANIZATION, STAFFING AND PLANNING STRATEGY

The above portions of this paper have specified the ingredients necessary to develop an information systems plan in the juvenile justice and youth services network. The degree to which any plan using these ingredients will be successful depends entirely on how the ingredients are combined and presented by the systems development team to the many people at the state, county and local levels who must accept, understand and eventually use the information system as an aid to completing their daily work assignments.

If an information system in the juvenile justice and youth services area is to be successful it means major changes in existing procedures and policies within law enforcement, courts, social services and private agencies. Furthermore, it means that these agencies and programs must, for the first time, become sincerely and seriously involved in the problems of sharing information across jurisdictional and agency lines. They must develop a detailed plan for doing so which is specific enough to use in a computerized set of directions.

Tackling both the policy and procedural changes and the interdisciplinary information sharing requirements at the same time can be overwhelming to an operations supervisor or department administrator who has many more important things to worry about than developing an information system for the juvenile portion of his program.

Realizing these constraints, persons on the systems development team for a juvenile justice information system would do well to follow these simple rules as they begin the planning effort: (1) Walk before you run! Develop and implement a simple tracking system on an inter-agency basis within a reasonable number of functions (courts, social services, law enforcement. (2) Don't overwhelm the people who have to support and approve your operation with tons of documentations and reams of flow charts and other technical data. (3) Establish a statewide applications advisory group to supervise and control the planning effort. (The members of this group should represent top agency personnel and directors of user functions as well as legislative and judicial repre-

sentatives. Citizens groups with human rights and resources as their major objective and civil rights groups should also be involved from the standpoint of security and confidentiality of development and approval.) (4) Don't short circuit the effort; involve the users all the way in the planning process. Use as much feedback from the users as possible. (This can be done by providing the users at the local and county level with the basic structure and ideas and asking them to comment on what is missing and what would make the ideas more useful and functional to them in their daily work.) (5) Establish formal local task forces in each of the counties where the systems will be demonstrated or tested. Have the task force involved in the demonstration and testing process and responsible for coordinating portions of the systems development effort. (6) Establish a formal project management team to provide the arms and legs necessary to do the daily work of developing the plan. This step is critical since plans do not materialize out of thin air and cannot be developed by a small group of interested personnel located in one agency. The project management team must also be interdisciplinary and should represent some of the people who will actually operate the system at the state level as well as some of the metropolitan counties. Members of the project management team could be appointed by their bosses who sit on the statewide advisory group. (7) Staff the project adequately with management systems analysts, data systems analysts and people who understand the youth services network. This will insure that the planning ideas and concepts developed by the management team and supported by the advisory group can be turned into a realistic document that makes sense and is reasonable to user organizations and programs. (8) Know exactly what you want and exactly how it will be structured before you write a request for proposal or a request for quotation to solicit the support services of a consulting firm. Don't let a consulting firm put in its system! It won't work. Hire a contracting firm, if necessary, to install a system you have defined with the user communities involved in planning. (9) Go out in the field and talk to the people who will have to support the concept and later the system as an operating entity. Do this early in planning

phase, help them to understand what you want to do, help them to think of good reasons for doing it or not doing it and gain their personal support even though it may delay the planning process as much as 6 months to a year. (10) Meet with legislatures, executive office budget personnel, data processing control groups, etc. within the state government and metropolitan planning bodies to discuss the possibility of developing a plan before you surface a request for funds to do so, or announce that the plan will be developed. Have these people involved early in the process in advance of detailing the major scope of the planning operation. (11) During the early stages of the plan, conduct an analysis of the decision making points on a functional basis to determine information requirements. By looking at functional relationships between programs that serve children and youth you will avoid mechanizing a manual system and you will substantially reduce the cost of records conversion and the size of the data base which will in turn minimize yearly maintenance costs. (12) Build a small portion of the information system first in one function and use it as a building block for continued systems development. Although the plan must describe the comprehensive interrelationship among the various functions and the agencies and programs within those functions this does not preclude the building or the moving ahead in one area or another where the political climate or agency readiness will accept such a departure from the total planning schedule. When this is possible, install a client data base or a client tracking system and use it to demonstrate the validity of the concept and usefulness of the operation.

Don't overlook project evaluation and in particular an evaluation design for testing the effectiveness of the plan once it is developed and demonstrated. Remember! A management information system of any type to be worth its salt must produce a change in its users' program output, and must produce a positive impact of existing programs. Any evaluation system must take impact measurement into consideration and test agencies with the information system against similar agencies without it in order to determine the success potential of an information system and justify its continued expense.



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