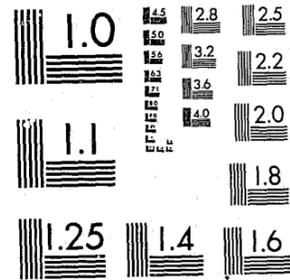


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DEPARTMENT OF ADMINISTRATION  
STATE OF KANSAS

HEALTH AND JUVENILE DELINQUENCY:  
Policy Research on the Prevention of Delinquency

by

Maurice J. Penner  
Assistant Director for Policy Research

and

H. Edward Flentje  
Director of State Planning and Research

U.S. Department of Justice  
National Institute of Justice

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Division of State Planning and Research  
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AUG 1

Health and Juvenile Delinquency:  
Policy Research on the Prevention of Delinquency

Few social problems impact state government as significantly as does juvenile delinquency and associated problems of youth. Ultimately, the state is responsible for providing facilities and programs for juvenile delinquents and pre-delinquents. The costs in Kansas now approach \$26 million a year, not including future welfare and correctional costs. In addition, the public's costs due to juvenile crime have been estimated at over \$1,000 per delinquent, and these costs become a factor in computing fire, auto, theft and business insurance rates -- costs that are borne by most citizens of the state.

This study was conducted at the request of the Governor's Task Force on the Problems of Youth in an effort to gain information on the health, educational and family backgrounds of young people in state custody. This report will discuss the health backgrounds of such youth and the policy implications for state action.

The Public Costs of Delinquency

The public bears the cost of juvenile delinquency in several ways. Government pays for the care, supervision and treatment of delinquent and pre-delinquent youth in detention centers, group homes, residential centers and state youth centers. In addition to these residential services, the public pays for court-employed juvenile probation officers to counsel and supervise youth with behavior problems. The nonprofit sector supports counseling and activity programs. Further costs result when these youth begin families they are unable to support.

In Kansas, no young person is placed outside of his or her home without a court order. The courts have seen an increasing number of youth with behavior problems and have placed more youth outside of their homes. In 1971, there were 12,985 juvenile court cases. This figure increased to 17,047 in 1974 and 21,007 in 1976. During this time, Kansas experienced an average annual decline in the number of children and youth (i.e., those aged 0-17) of approximately one percent.

When older youth (aged 12 or over) appear in court, it is usually as a result of behavior problems. When the court determines a need for placement outside of the home, the youth is placed in state custody and the costs for his or her care are paid out of public funds. On March 31, 1976, 972 older youth were in state custody. This figure increased to 1,335 on September 30, 1976 and further increased to 1,624 on September 30, 1977.

During the 1960s, most of these older youth would have been placed in state youth centers: there were between 200 to 250 such placements annually. Annual placements began to increase in the 1970s and reached 432 in fiscal year 1978. The costs for running these centers and the increases in the number of centers has resulted in a fiscal year 1978 cost of \$6.5 million for their operation, up from the fiscal year 1974 cost of \$4.1 million.

During the same period, many new group homes and residential centers were established and many young people who, in the 1960s, would have been placed in state youth centers now are placed in group homes and residential centers. The demand for such facilities has become so great that many youth now are placed in detention centers for several months until an appropriate group home placement can be made. In the first quarter of 1977, 2,156 older youth spent some time in detention centers and in other forms of group care. The costs to the state for this type of group care now exceed \$11.0 million a year.

Additional public costs, such as welfare costs, are incurred when these youth begin families they are unable to support. Welfare costs include income support and medical and social services. While the rate of pregnancy for women over age 18 has declined in the past 20 years, the rate for girls aged 14-17 has remained at about the same level. In 1975, seven out of every 100 Kansas babies were born to girls aged 14-17 and an almost equal number of girls received abortions, a rate much higher than for other age groups. Few of these teenage mothers give up their

babies for adoption, and many of them apply for welfare. Currently, seven percent of all welfare families are headed by teenage mothers, with a resulting cost of over \$4.2 million in income support and a similar amount for medical and social services.

When one totals these public costs -- \$6.5 million for state youth centers, \$11.0 million for group care and \$8.5 million for welfare -- the sum becomes a significant part of the state's budget. If research shows that new policies are likely to reduce the number of youth needing such services, then the initial costs for these policies could be supported through future cost savings.

#### Policy Responses

Juvenile delinquency has many causes including poverty, racism, weak family structures, schools, neighborhoods, peer groups, mental illness and other factors. However, current policies for dealing with delinquent youth are based on social interventions: family and individual counseling, tutoring, activity programs, supervision, and out-of-home placement for those who come to the attention of the police or courts. In some cases, schools and other agencies refer pre-delinquent youth to counseling, activity or tutoring programs, or to the court. These policies can be described as treatment-based, with a range of treatment services available in most areas of the state.

This treatment orientation assumes that delinquent youth will be identified by the courts and police or by the schools and it assumes that these services can be effective in controlling and preventing future cases of delinquent behavior. However, evaluations of such treatment efforts show little evidence of their success. Since most social interventions are not begun until the youth has come to the attention of the authorities (usually after age 10), it is likely that such young people have already engaged in several delinquent acts and have begun to consider themselves delinquents. It is difficult for a treatment program to be successful at this stage, and many of the successes may be more the result of maturation than of intervention.

Few efforts aim to prevent delinquency, primarily because of the length of time costs must be borne before results can be shown. These efforts can be divided into two types -- those that rely on changing the institutions and factors associated with delinquency (family, school, neighborhood, poverty, unemployment and racism), and those that rely on predicting which children are likely to become delinquent. Since institutional change depends on many factors often outside the purview of state government, we will not discuss it here. However, some researchers contend that delinquency can be predicted and that interventions should begin in order to prevent these youth from becoming future delinquents. They suggest that teachers can predict delinquency after a child has been in school two to three years; they have developed several testing instruments for use in such delinquency prediction. However, the predictive accuracy of these instruments has not been tested, and success of prediction may not mean success in prevention.

Even though we accept that early interventions are preferable to later ones, it is clear that many problems cannot be solved by interventions, especially if the family is uncooperative. For example, the problems of parental alcoholism and mental illness (two factors used in many of the prediction scales) cannot be treated without full cooperation of the parents. Without that cooperation, the only remaining intervention is removal of the child from the home, an action which may not reduce the likelihood of that child becoming a delinquent and which may result in even greater harm to the child and the family. Indeed, use of predictive instruments could result in more juvenile delinquency as teachers and other staff begin to expect delinquent behavior from those so tested and begin to treat those children as pre-delinquents.

In order to avoid these problems, a prevention strategy should be based on: 1) the early identification of problems associated with delinquency; 2) the limitation of treatment to those identified problems for which intervention is effective; and 3) the avoidance of labeling children with these problems as pre-delinquent. If

a prevention strategy can be developed consonant with the principles listed above, consideration should be given to its testing.

#### Health and Juvenile Delinquency

Recently, several published studies have examined the current health status of incarcerated delinquents and detained youth (Chaiklin 1977, Litt and Cohen 1974). These studies have found that a large proportion of this population has unidentified health problems, including problems of vision, hearing, teeth, infections (hepatitis, venereal disease), etc. These studies are based on large samples: Litt and Cohen's study spanned 60 months and had a sample of 31,323 youth aged eight to eighteen. In their study, 46 percent of the youth were found to have a problem needing medical attention. Chaiklin, Chesley and Litsenger's study of 223 incarcerated delinquents showed 65 percent having a health problem needing medical attention.

These figures should not be surprising in light of the generally low-income backgrounds of most delinquents. The Early Periodic Screening, Diagnosis and Treatment Program (EPSDT), which must be available to all Medicaid children, consistently has found a high incidence of such problems.<sup>1</sup> Around one half of the youth screened by EPSDT are found to have health problems,<sup>2</sup> and one study shows that these problems were known to parents in only around half the cases.<sup>3</sup>

While such studies of health status and delinquency recommend that health care be improved in our youth confinement centers and that confined youth be followed up after release to insure their health needs are met, they do not discuss strategies for the early detection and prevention of such problems. Nor do they discuss the relationship between health and juvenile delinquency. Do juvenile delinquents differ from nondelinquents in their health problems? Are these problems related to delinquency?

We can begin to answer these questions by comparing the medical histories of delinquents and nondelinquents to see if the health problems of the two groups differ. If delinquents are shown to be more likely to have health problems that are

associated with school or behavior problems, then prevention strategies should be considered by policymakers.

A recent study by Lewis and Shanok (1977) shows that delinquent youth differ from nondelinquent youth in their accidents and injuries. In that research, a group of 109 delinquent youth were compared to a matched group of nondelinquent youth. The delinquent youth showed a much greater incidence of accidents and injuries, as well as a greater frequency of child abuse. These differences in accidents and injuries were only significant in two age groupings -- ages 0-4 and 14-16.

Surprisingly, there were no differences between groups in the perinatal complications, even though delinquent youth were much more frequently abused. Such information leads the authors to conclude that parental abuse and neglect may have been the cause for the delinquent youths' greater number of accidents and injuries. Ages 0-4 are the years of greatest motor development, the time the child has greatest need for protection from mistakes made in early motor exploration. Ages 14-16 also are years of considerable motor development: mid-teen ages can be especially dangerous years as these are also the years when youth are redefining their boundaries and are more likely to take physical risks.

One can extend the notion of parental neglect resulting in accidents to parental neglect resulting in health problems. Some of the most common childhood health problems relate to parental care and result from a lack of parenting skills and health knowledge. They include hearing (lack of care for upper respiratory infections), hyperactivity (lack of proper diet control), speech (lack of attention to a child's need for conversation, role modeling and feedback on speech), and perinatal and postnatal brain damage (lack of prenatal care, inadequate nutrition and neglect of a child's need for supervision in early years). This lack of knowledge can result in health problems through inadequate care and also can result in failure to identify these problems until after the child enters school.

Following this line of reasoning, one assumes that children with behavior problems are more likely to have early childhood problems of hearing, hyperactivity, speech or brain damage and furthermore that these problems are undetected until after the child's entrance into first grade. The rationale for linking these health problems to problems of behavior is as follows: Beginning in the first grade, demands are placed on children to control their behavior and to direct their energies into achieving in school and getting along with peers. The health problems discussed above make school achievement more difficult. A child who does not hear much of what the teacher says will learn less and be less able to respond to the teacher and other pupils. A hyperactive child is a behavior problem to other children and usually does poorly in school.

Detection of these problems often does not occur until after the child's delinquent status has resulted in incarceration, at which point medical examinations usually are given. For some children, the schools do not detect many health problems (even those problems for which schools usually screen, such as hearing and vision) because delinquent children tend to move frequently and therefore, attend a large number of elementary schools.<sup>4</sup> Problems are allowed to fester, making their treatment more difficult.

More importantly, these health problems result in behavior problems at school and with peers.<sup>5</sup> Also, it is likely that a poor self-image results from the youth's learning and interaction difficulties. Behavior problems, coupled with a poor self-image, can result in such children labeling themselves as delinquent, thereby reinforcing the labeling done by others.

Therefore, the hypothesis of this study is that youth with undetected health problems (and particularly the most common problems discussed above<sup>6</sup>) are more likely to become delinquent. The strategy employed to test this hypothesis is to gather information on the health backgrounds of youth in youth centers and group homes in order to verify the presence of a high incidence of health problems that were not detected until several years after entrance into school.

### The Study

In the Fall 1978, the Governor's Task Force on the Problems of Youth requested this research in order to gain information on the backgrounds of young people in state custody. Task Force members hoped that information on backgrounds would help them identify and reach agreement on those factors of a health, family background and educational nature that would be amenable to state action in order to reduce the number of youths being placed in state custody. Data for the study had to be collected and reported back to a subcommittee of the Task Force within two months of their request. Because of time limitations, the study's questionnaire included many items in an attempt to collect as much information as possible on school, family and health backgrounds.

Even though this study was aimed at collecting as much data as possible on the backgrounds of sampled youth, it was hypothesized at the onset of the study that youth who were in state custody for committing felonies (delinquent) or misdemeanors (miscreant), for uncontrollable behavior (wayward), or as a result of parental abuse or neglect (deprived) and who also had behavior problems would have a high incidence of late-detected health problems -- in particular, problems of hearing, hyperactivity, brain damage and speech. There are two reasons for selecting this hypothesis: 1) a state audiology team found that about 40 percent of the youth at the boy's youth center had hearing problems; and 2) the high incidence of learning disabilities of juvenile delinquents reported in most studies of juvenile delinquency and learning disabilities (despite the lack of a good definition for learning disabilities in most of these studies).

In addition, this hypothesis provided an opportunity to explore an important policy question: If the relationship between health and delinquent behavior is verified, what forms of state intervention should be considered and undertaken?

Because the hypothesis was selected for its policy implications, the definition of what constitutes a health problem was limited in several ways. First, health problems are limited to those likely to be detected in a health assessment program meeting the standards of the Early Periodic Screening, Diagnosis and Treatment Program (EPSDT). This program includes screening for hearing, vision, speech, hyperactivity, motor development, various neurological conditions, and general health and dental problems. Since this program is available widely, any policy initiatives regarding health screening would have to consider its use.

Second, only those problems likely to cause learning or behavioral problems were recorded as health problems. For example, dental problems were excluded since their effect on school and peer groups usually is not pronounced.

Third, since the emphasis is on the early detection of health problems, this study includes only those health problems likely to be detectable in the preschool years, and those particular problems for which evidence exists of their presence before school entrance. For example, most visual problems are not detectable until the middle to late elementary grades and were not included; however, developmental visual problems such as amblyopia were included.

In sum, only those health problems that are likely to be detected in the preschool years, that are likely to cause learning or behavior problems, and that are likely to be detected by a commonly existing screening program are included in this study.

The study consisted of the review of records and interviews with staff of four different groups of youth in state custody: those in group-boarding homes due to abuse and neglect; delinquent, miscreant and wayward youth in group-boarding homes; boys in the Youth Center at Topeka; and girls in the Youth Center at Beloit. Samples were drawn randomly from each youth center. A random sample of youth in group care was drawn and was subdivided into two samples -- 1) delinquent, miscreant and wayward youth, and 2) abused and neglected youth.

The study was conducted during the autumn of 1978. One interviewer collected the youth center portion of the data. Data collection for the group-care portion was completed by social work staff of the Division of Children and Youth, Department of Social and Rehabilitation Services. In all cases, interviewers held master's degrees in social welfare, and most had several years' experience working with the youth populations sampled in this study.

The interview schedule included several components: information on family background; educational and medical histories; current status; and psychological and educational testing. The sources of each information item were recorded as either provided by staff or by records, and in the youth center portion, some additional information was gained by interviewing the client. Twenty-one cases of the dependent and neglected sample and thirty-five cases of the delinquent, miscreant and wayward sample were discarded due to insufficient information. Usually this insufficiency was a result of no medical or educational history in the client's file. Since the purpose of this report is to discuss the relationship of health and delinquency, only health-related information will be discussed. Data on the family backgrounds, education, and psychological and educational testing are currently being coded for analysis at a future date.

Findings

The following table shows the incidence of selected health problems for each sample.

Incidence of Late-Detected Health Problems  
in Selected Samples of Youth in State Custody

<u>Sample</u>	<u>Neuro- logical</u>	<u>Hyperac- tivity</u>	<u>Hearing</u>	<u>Speech</u>	<u>Other</u>	<u>Total</u>
Youth Center at Beloit 25 cases: No cases with multiple problems.	6	2	0	2	2	12
Youth Center at Topeka 25 cases: 17 cases with at least one problem; 9 with multiple problems.	6	5	6	4	8	29
Delinquent, Miscreant and Wayward in Group Homes 41 cases: 28 cases with at least one problem; 7 with multiple problems.	13	13	3	4	6	39
Deprived in Group Homes 63 cases: 35 cases with at least one problem; 22 with multiple problems.	16	17	2	10	23	68

The other category includes such diagnoses as amblyopia, anemia, early autism, hormonal imbalance, epilepsy, chronic sore throats and bronchitis, and other problems. Neurological problems include severe motor problems, seizures, and brain damage. Hyperactivity is viewed as a health problem that can often be controlled by diet even though it often may be misdiagnosed as a behavioral problem.<sup>7</sup> Hearing problems were included only where the case histories indicated that the hearing loss was severe and might have caused problems in school. Speech problems were limited to those of delayed speech development eventually requiring speech therapy in school.

In light of studies cited earlier, the high incidence of health problems identified in the table is not surprising. Sixty-eight percent of the sample at the Youth Center at Topeka and 48 percent of the sample at the Youth Center at

Beloit had late-detected health problems. A similarly high incidence is found for delinquent, miscreant and wayward youth (62 percent) and for youth who had been abused and neglected (54 percent).

To help explore the hypothesis that late detection of these problems is associated with delinquency and behavior problems, the data on abused and neglected youth were separated into two groups: abused and neglected youth with behavior problems, and those without. While abused and neglected youth are placed in state custody as a result of the inability of a parent or guardian to care for the child's needs, such children often have or develop behavior problems of their own. A review of the other samples indicates that these same youth often become delinquents.<sup>8</sup>

Thus, the abused and neglected youth were divided into two groups -- those with and those without behavior problems -- and the incidence of no, early- and late-detected health problems were compared.

	<u>No Behavior Problems</u>	<u>Behavior Problems</u>
No detected health problems	11	5
Early-detected health problems	10	1
Late-detected health problems	3	33

Both groups of youth are likely to receive health screening near the time of their placement, since proof of physical abuse or neglect usually requires confirmation by medical personnel, usually a public health nurse. Thus, the youth without behavior problems can be viewed as a logical control group, sharing as they do with other groups the similar experiences of abuse and the equal likelihood of receiving health screening at the time of placement in state custody.

These data provide evidence for a link between late-detected health problems and behavior problems. While the sample size (24) for the control group is not large, the direction of the findings is clear. If health problems are not in evidence, behavior problems are less likely. If health problems are detected at an early age

(kindergarten or earlier), behavior problems are extremely unlikely. Yet, when health problems are detected after kindergarten (usually as late as ages 10-16), behavior problems are present in 92 percent of the cases.<sup>9</sup>

Policy Options

Given these findings and the desire for a prevention strategy for reducing the number of delinquents, consideration should be given to policy options that would increase the likelihood of early detection and treatment of these problems.

1. Expand Maternity and Infant Care Projects. Amendments to Title V of the Social Security Act have required each participating state to implement at least one maternity and infant care project. These projects usually are operated out of the local health department and consist of providing nutrition, parent education and medical services to a high-risk population for perinatal complications (usually adolescent mothers). Costs average around \$1,000 per mother, and postnatal care is given for a period of up to one year.

The major benefits from this program go beyond the reduction of perinatal complications. Health screening is provided, resulting in the early detection of many health problems. More important, the parent education portion can make new parents more knowledgeable about the care of their children and the need to provide close supervision. This program can reduce both health problems resulting from perinatal complications and problems resulting from a lack of knowledge or care in the early years of childhood. The net effect depends on the proportion of high-risk mothers who are served and the effectiveness of the parent education program.

However, there will always be a significant proportion of mothers who will not know about or participate in this program. The program is also costly. With over 36,000 births each year in Kansas and with around seven percent of these to adolescent mothers, full program coverage could amount to over \$2.5 million a year, a sizeable amount in these days of program reductions and deletions.

Currently, there are eight projects in seven of the state's more populous counties; however, there are twelve additional counties with 30-70 adolescent pregnancies occurring annually and with no maternity and infant care program. With the \$20,000 needed for minimum support of a health project, minimal coverage could be gained in Kansas at an annual cost of \$240,000.

2. Require a Child Health Assessment for First-Time Attendance at a Kansas School. The State of California began requiring a child health assessment in the 1975-1976 school year as a condition for first-time attendance at California public schools. The assessment must meet the standards set for the Early Periodic Screening, Diagnosis and Treatment Program and funding for it includes Medicaid payments for all Medicaid eligible children and state payment for all non-Medicaid children from families earning less than \$10,656 for a family of four. Parents may also waive the screening requirement.

The California program already has resulted in the detection of many of the problems cited in this study and has provided parent education which can prevent future problems. While screening at an earlier age (e.g., age 3) is preferable for the detection of most of these problems, a policy that requires screening as a condition for admission to a universally used institution (the public school) insures that coverage will be comprehensive and only a few children will not be screened. The program also requires follow up to assure that parents are obtaining treatment for health problems identified in their children. This policy must be initiated by states but could be encouraged by state or federal funding.

3. Require or Encourage EPSDT for all Children Receiving Medicaid. One policy option would be to mandate health screening for all children receiving Medicaid assistance. Current federal law requires that EPSDT screening be available on request for any child receiving Medicaid but precludes states from making such screening a requirement for receiving Medicaid, unless the state requires screening for all children as California has done. Given Lewis and Shanok's

thesis that parental neglect may be the cause for many of these health problems, it is unlikely that many of the abusive and neglectful parents would request screening for their child. This policy initiative would also require amending the Social Security Act.

Since this health screening requirement could be mandated only by congressional action or by making EPSDT a requirement for all children first entering a Kansas school, consideration should also be given to an alternative, that is, encouraging the use of EPSDT by Medicaid and non-Medicaid families. Currently, only 17 percent of the Kansas children receiving Medicaid assistance have received EPSDT as compared to 37 percent in Nebraska and even higher figures in other states. Many health departments report two to three non-Medicaid screenings for every Medicaid one. Given these state differences and the acceptance of EPSDT by non-Medicaid families, it appears that additional efforts made by state agencies could increase the number of Medicaid and non-Medicaid children so screened. These efforts include transportation assistance, public information campaigns and urging by teachers and social service staff. The principal drawback of this option is that many children will not be screened as there is no requirement for so doing, and those children whose parents are most neglectful will be least likely to receive the screening. Nevertheless, this option is better than no action at all, and the implementation of any requirement or encouragement could result in cost savings to both the states and the federal government.<sup>10</sup>

On the question of cost savings, Kansas recently began collecting information on the Medicaid costs of youth who had received EPSDT as compared to those not receiving this screening. This information is collected monthly and includes all youth who received Medicaid services other than screening. The figures are as follows:

Average Medicaid Costs Per Child in Kansas  
for Screened and Non-Screened Children\*

Month (1978)	Ages 0-5		Ages 6-20	
	Screened	Non-Screened	Screened	Non-Screened
August	\$45	\$54	\$47	\$ 56
September	\$51	\$75	\$60	\$147
October	\$57	\$65	\$73	\$224
November	\$94	\$99	\$97	\$279

\*These figures do not include the cost of the screening

Since collection of this information is a federal requirement, several other states having such systems were contacted. Only Tennessee was actually in compliance with this requirement and reported annual average costs of \$87 a month for screened youth and \$431 for unscreened youth.

Recently, we received a draft copy of a study done in North Dakota on EPSDT.<sup>11</sup> This study attempted to determine the impact of EPSDT on the utilization and costs of Medicaid services. It compared three groups of children receiving Medicaid services: 1) those who received EPSDT screening in the test community, 2) those who received Medicaid services and did not receive screening in the test community, and 3) those who received Medicaid services and did not have screening available in a control community. Included as costs are the costs of EPSDT screening. While the study has a sampling problem, that is, screened children were included in it even though screening may have been the only service they received from Medicaid, the reason for the lack of other Medicaid services may have been the screening. In any event, the cost differences for screened

children were significantly less than for the other two groups (36 percent and 44 percent respectively), and these differences were greater than the potential sampling error. Even if all the screened children who received no other Medicaid services were excluded from the study, the screened group still would have lower costs.

The study also analyzed cost differential as presented in the table below.

Medicaid Cost Differential Between Screened and Non-Screened Children  
in a Test Community and a Control Community

	Test Community	Control Community
Inpatient Hospital Services	47% Less*	58% Less
Pharmaceuticals	18% Less	21% Less
Physician Services	6% More	65% More
Dental Services	14% More	2% Less
Optical Services	71% More	3% Less
TOTAL	36% Less	44% Less

\* "Less" indicates lower costs for the screened group.

As expected, screened children have lower inpatient costs, higher outpatient costs and lower overall costs.

These findings are significant in that some would predict that overall costs would be much higher for EPSDT-screened children. Kansas and national data on EPSDT show that one-fourth to one-half of all screenings result in referrals for health services with Medicaid paying the cost of such services. However, the costs for these services appear to be less than the costs for the late detection of problems.

To determine reasons for these cost differences, one might surmise that parents of screened children are more responsible about health care than are parents of unscreened children. However, an HEW survey indicates several reasons for parents making use of EPSDT: responsibility for health care; knowledge about

screening; accessibility to transportation; and the urging of social service or school personnel to have screening performed. The fact that so many health problems are found in all EPSDT screening programs indicates that these children are no healthier, initially, than those who are not screened.

#### Conclusion

There are many causes of juvenile delinquency, some of which are amenable to policy initiatives by state government. This study demonstrates: a strong association between undetected health problems and juvenile delinquency; that current detection efforts are not successful in insuring that health problems will be detected for those youth that become delinquent; that several well established programs are successful in detecting and preventing future health problems for the clients they serve; and that successful programs do not label children as future delinquents. Given the high public costs for the care and treatment of delinquents, policy initiatives that reduce the number of delinquents should be considered carefully, and the costs for so doing should be viewed as an investment in the development of Kansas' human resources.

#### FOOTNOTES

<sup>1</sup>Telephone interview with Judy D'Ambrosio, EPSDT Specialist with the Kansas City Regional Office of the U.S. Department of Health, Education and Welfare.

<sup>2</sup>Ibid.

<sup>3</sup>"Child Health and Disability Prevention Referral Study" 1978.

<sup>4</sup>Both Litt and Cohen (1977) and Chaiklin, et al, (1977) discuss the finding that incarcerated delinquent youth attend a large number of elementary schools and while some of the youth suspect that they have health problems, these problems seldom are identified by the schools.

<sup>5</sup>The description of how these health problems result in school and peer-group problems is not within the scope of this study. One can speculate that the differences of these youths in their abilities, e.g., speech, hearing, self-control and motor skills, and their lack of knowledge that these problems are of a health nature, may result in a poor self-image making more likely self-labeling by the youth as deviant. Certainly, these problems of health do impede such youths from developing shared meanings and therefore, may limit the youth's interactions in the family, school and peer group.

<sup>6</sup>While many of the health studies on poor children (as well as the health studies on delinquents) have shown a large number of dental problems, these dental problems are not viewed as significant in causing other problems in school, family and peer interaction and are omitted from consideration in this study.

<sup>7</sup>Conrad (1975) points out that hyperkinesis can be viewed as a behavior problem that has been medicalized. He points out that medicalization can result in some benefits to youth who would otherwise be labeled as delinquent; however, he also states that the process of medicalization can result in increased social control of those labeled as deviant. In the case of hyperactivity, medicalization with drugs can result in control.

<sup>8</sup>Well over 40 percent of the delinquent youth in the youth center samples were abused and neglected as youth.

<sup>9</sup>These findings must be tempered by the study's limitations. This study is of an exploratory nature, in which evidence was sought for the general hypothesis -- that undetected and late-detected problems of health and development are more likely to be found in juvenile delinquents than in nondelinquents. The study was not performed with the controls necessary for hypothesis-testing: 1) the control group of abused and neglected youth without behavior problems is a subsample of abused and neglected youth in group care, which is in turn a subsample of youth placed in group care; 2) several interviewers conducted interviews for these samples, after having had little training in filling out the questionnaire, which resulted in cases being discarded due to insufficient educational and medical information in the files; 3) hyperactivity was viewed as a health problem, and while many cases had additional documentation for its medical basis, some cases might have resulted from a social worker's labeling as hyperactive those youth with behavior problems regardless of etiology. In spite of these problems, the findings have important policy implications and call for further research designed with the controls that

were lacking in this study. For example, the sampling for a control group must be based on a larger sample than the one used in this study, and the control group selection must be done carefully. The definition of health problems and the proof for their presence should be based on sound medical criteria; problems resulting from poor prenatal care and perinatal complications should be differentiated from problems resulting from parental neglect and lack of knowledge; and the description of how these problems do, in fact, cause additional learning and behavior problems should be described in greater detail and be based on direct observations of youth and subsequent identification of specific health problems.

<sup>10</sup>States and the federal government share in the costs of this program, and these costs are a significant part of a state budget. In Kansas almost 10 percent of the state's funds for general use are spent on state support of Medicaid.

<sup>11</sup>"Cost Impact Study of the North Dakota EPSDT Program" (1978 draft).

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