

The Costs Of Child Abuse vs. Child Abuse Prevention: Michigan's Experience

Robert A. Caldwell, Ph.D

Michigan State University

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Abstract

A state-level analysis of the costs associated with child maltreatment and its consequences was undertaken. These costs were then compared to the costs of providing child maltreatment prevention services to all first time parents. The costs of child abuse were estimated at 823 million dollars annually. These costs include those associated with low birthweight babies, infant mortality, special education, protective service, foster care, juvenile and adult criminality, and psychological services. The costs of prevention programming were estimated to be 43 million dollars annually. This yields a 19 to 1 cost advantage to prevention.

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Economic conditions in the 1990's have put our nation's children at increased risk for child abuse and neglect. The added stresses and reduction in resources that characterize an economic recession combine to put children at risk for maltreatment. However, the 90's have also brought good news to those concerned with the protection of children: 49 of the 50 states have created and funded agencies specifically for preventing child abuse (National Committee for Prevention of Child Abuse, 1990). These agencies (often named "Children's Trust and Prevention Fund") have been created within the last 10 years--many within the last 5 years. As new agencies, they are still discovering effective ways to prevent child maltreatment.

Children's Trust and Prevention Funds (CTF) represent a powerful force: the right idea at the right time. Their formation provides an opportunity to enhance the quality of children's lives. Currently, both state and federal governments are turning away from major new initiatives in social services generally and child abuse prevention specifically. In Michigan, as in many states, the contemporary zeitgeist stresses self-help, empowerment, and private sector programs rather than dependence on government to provide prevention services. CTFs embody these principles; many are not government funded; many fund grass root, local organizations to provide locally designed child abuse prevention services; many make extensive use of volunteer services; and all believe in--and work for--the empowerment of families.

Most importantly, they all believe in prevention. The original idea behind CTFs, as conceived by Ray Helfer, M.D., was that they would be organizations dedicated to the prevention of child abuse rather than the treatment of its victims or perpetrators. It isn't that treatment is unimportant, it is just that agencies already exist (public and private) who see

treatment as their mission. CTFs see prevention as their exclusive, or at least major, mission.

Of all the possible focuses of prevention, child maltreatment is one of the most compelling. The promise of child maltreatment prevention is that it effects savings in several important areas. The most obvious savings are, of course, in the lives of the children who will not suffer the devastating effects of physical, emotional, and sexual abuse. Beyond their benefit, we accrue both tangible and intangible dividends as a society. We benefit when children grow into their potential as full contributors to the life and fabric of society. Finally, by preventing child abuse we save the staggering amounts of money spent annually dealing with its consequences. The purpose of this paper is to detail some of the costs of child maltreatment and some of the benefits of its prevention. It is intended to support and encourage the advocates of prevention and to provide some guidance to policy makers in the area of child abuse prevention.

The rationale for prevention seems clear. It is common wisdom among prevention advocates that no disease or social problem has ever been brought under control by providing after-the-fact treatment to the victims of the disease or problem. Preventive, proactive, before-the-fact interventions have, historically, been the only effective way to control or eliminate important diseases. Public health prevention programs to control smallpox and polio are prime examples. In addition to the impressive effectiveness of such preventive interventions, they have been remarkably cost effective--often costing only a small fraction of the expense of treatment. This cost effectiveness is captured in the folk saying, "An ounce of prevention is worth a pound of cure." This paper will determine whether the facts support the 16-to-1 cost advantage for prevention claimed in this adage.

Cost-Benefit Analyses

Ideally, support for the prevention of child abuse should grow out of a careful analysis of the associated costs and benefits of the available alternatives. First, the costs and scope of the problem need to be documented. These can be compared to the costs and effectiveness of prevention efforts. The results of this comparison provide the information needed to make informed choices about where and how to attack the problem of child maltreatment.

There are problems obtaining clear estimates of each variable listed above. First, there is wide variability in estimates of the incidence of child abuse. For the purposes of this paper, the official reports of substantiated child abuse cases, as reported by Michigan's Department of Social Services, will be used to measure the child abuse incidence. However, we should be careful not to confuse official with accurate. Many factors in addition to the abusive interaction between child and parent influence the process which results in a substantiated case being declared. Factors such as the philosophy of the local Protective Service (PS) department, the staffing level of the department, the current caseloads of the PS workers, and characteristics of the family beyond the abusive incident all influence whether a complaint of potential abuse will even be investigated, much less substantiated (Hampton, Daniel, & Newberger, 1983; Turbett & O'Tool, 1983; Wilson, Thomas, & Schutte, 1983). This observation is not meant as a criticism of the work of PS field staff, but to remind us that any estimate of child abuse incidence is just that--an estimate. In fact, the estimate provided by official counts of substantiated abuse cases is widely understood to be an underestimate of the actual incidence of child abuse (U.S. Department of Health and Human Services, 1982).

The costs of child abuse are also very difficult to calculate. Some costs seem straightforward and directly related to abuse. Examples include hospital costs for medical treatment of injuries sustained as a result of physical abuse and foster care costs resulting from

the removal of children from abusive homes. Other costs are less directly tied to the incidence of child abuse. For example, we know that victims of child abuse are at greater risk for troubles in school (Daro, 1988), involvement with the juvenile justice system (Lewis et al., 1989), and mental health problems (McCord, 1983) than are nonabused children. However, not all abused children evidence such problems and some who do may do so for reasons unrelated to their abusive history. Ignoring these costs would be a serious omission from the analysis of the cost of child abuse, yet care must be taken not to overestimate the costs involved.

In many ways, the costs of prevention are the easiest part of the equation to measure. For the most part, both prevention expenditures and the number of people reached by preventive interventions are known. The difficult part of the prevention equation is the estimate of prevention effectiveness. Most preventive interventions are not evaluated in a way that would allow a definitive statement about how many instances of child maltreatment were actually prevented. Even when programs are evaluated, the evaluations often lack the methodological rigor that is required to truly demonstrate a program's effectiveness in preventing abuse.

These problems seem daunting enough. However, the difficulties of doing a cost-benefit analysis in the area of child abuse prevention do not end here. Deborah Daro, in her 1988 book, *Confronting Child Abuse*, showed how many of the assumptions and techniques of standard cost-benefit methodology work against the most popular kinds of child abuse prevention programs. The metric of the cost-benefit analysis is, of course, dollars. This fact carries certain consequences. For example, by using economic measures of the value of a life, we underestimate the value of programs that work with segments of the population who are at an earning disadvantage (e.g., women or poor people). Quantifying the benefits of interventions with children in financial terms is particularly difficult, since their financial contribution to

society is many years in the future. Additionally, a financial accounting of "benefit" is not to the advantage of programs achieving less tangible outcomes (e.g., better self-esteem, more effective parenting).

In spite of these difficulties, it is important to examine the information that a cost-benefit analysis provides. Prevention advocates need to make prevention's case with hard financial data. Prevention efforts cost money, and as these efforts are expanded, the total costs for prevention will go up. Accountability demands proof that preventing child maltreatment is not only the right thing to do, but that it is also a financially prudent thing to do.

This paper presents a state-level analysis rather than either a local or a national analysis for two reasons. First, many of the policy decisions about how to spend money in the area of child maltreatment are made at the state level. Second, the cost implications of these policy decisions are most directly felt on the state level. The agencies responsible for dealing with child abuse and its consequences (e.g., social service, foster care, education, corrections) typically represent major segments of every state budget.

The figures presented in this analysis come from Michigan. Michigan's Children's Trust Fund (MCTF) was created in 1982 for the sole purpose of child maltreatment prevention. In the 10 years of its existence, MCTF has spent over seven million dollars on child abuse and neglect prevention. Over five million dollars of this amount have been spent for direct service prevention programs, while approximately two million dollars have been spent on building community infrastructure for abuse prevention (Michigan Children's Trust Fund, 1992).

Costs and Consequences of Child Maltreatment

Nationwide, during the five year period from 1985 to 1990, child abuse reports to state

social service agencies increased 31% (Daro & McCurdy, 1991). The most recent figures show that over 2.5 million children were abused in the U.S. during 1990 (Daro & McCurdy, 1991). In Michigan, state social service figures are collected for the fiscal year (October 1st to September 30th). For fiscal year 1991 there were 15,940 substantiated cases of child abuse in the state of Michigan (Health & Welfare Data Center, 1991). Each case represents a family and often includes more than one child victim. Michigan statistics identify two types of child victims; children for whom abuse has been substantiated and the other children in the home. These children become involved in the PS system because of the abuse to their siblings and because of their own potential to be abused. During 1991 there were 39,452 children involved in the Protective Services (PS) system as a direct result of child maltreatment. In this same year, 26,366 of these children were substantiated victims of abuse or neglect. With the exception of calculating the medical costs of treating abusive injuries, the larger of these numbers has been used throughout this paper. This choice is based on the conviction that the majority of consequences of abuse derive from living in an abusive home environment rather than from the abuse itself.

It is difficult to precise about the actual costs involved in child maltreatment; many choices and assumptions have to be made in order to calculate a cost figure. Many, if not most, of the choices made in this paper will generate little controversy. However a few of the choices are, admittedly, somewhat arbitrary and may engender disagreement among readers. Choices in this paper were made from a prevention perspective. That is, the question, "What costs are likely to be reduced if an effective child maltreatment prevention program was instituted?" provided the framework for decision making. The kind of prevention program imagined in the above question is one that starts prenatally and works intensively with parent(s) during the first year of

a child's life.

This kind of program can actually help the child come into life in a more robust and healthy state. Therefore, appropriate costs of low birthweight and infant mortality are also calculated in the costs of child maltreatment. In addition to these costs, data will be presented for costs associated with several short-term consequences of child abuse (e.g., medical treatment, child protective services, foster care) and long-term consequences of child abuse (e.g., special education, legal system involvement, psychological problems).

Low birthweight babies. Low birthweight babies are those who weigh less than 2500 grams or 5.5 pounds at birth (Children's Defense Fund, 1990a). The cost of a low birthweight baby is between \$14,000 and \$30,000 above the cost of normal birthweight babies (U.S. Congress, Office of Technology Assessment, 1988a; Children's Defense Fund, 1990a). These costs include newborn hospitalization, rehospitalization within the first year, and other health care costs associated with low birthweight (U.S. Congress, Office of Technology Assessment, 1988a). During 1989 (the most recent year available), 7.6 percent of all Michigan births were low birthweight (Center for the Study of Social Policy, 1992). In Michigan, there were 153,080 babies born during 1990 (MI Department of Public Health, 1992). It is likely that 11,634 of these babies were low birthweight babies. Taking the middle point of the cost range (i.e., \$22,000) these **low birthweight babies cost over \$255.9 million dollars.**

Death due to child abuse and preventable infant mortality. The costs are hardest to calculate in the case of preventable infant mortality and death due to child abuse. How does one measure the worth of a human life? How does one measure the loss to society of contributions in

the arts, sciences, politics, or business that will never be made? These contributions are impossible to quantify in financial terms. However, one way to approach this area is to recognize that people, whatever else they may be, are often wage earners and taxpayers during their lifetimes.

In 1989, per capita income in the state of Michigan was \$17,745 (Hoffman, 1990). The average lifetime participation in the labor force is approximately 33 years (Daro, 1988). Using these figures, the average Michigan resident would have \$585,585 in lifetime earnings. This estimate does not take into account the rate of inflation, so we can safely say that each child fatality during this year will result in one person not earning over half a million 1992 dollars.

This represents a loss to the economy and a loss in local, state, and federal tax revenue. Michigan's state income tax is currently 4.6%, so over the course of a lifetime, assuming no changes in rate, Michigan would lose \$26,937 per person in tax revenue. If we charge this loss to the year in which the child died, we can begin to calculate a cost for infant and child mortality.

It is clear that not all infant mortality is preventable or the result of poor prenatal care on the part of the mother. Yet there is a definite relationship between the adequacy of the mother's prenatal care and the health of her baby at birth.

The high proportion of women who receive either no prenatal care or none until after the sixth month of pregnancy represents one of the most serious health problems facing the nation. Not only do the infants face a higher risk of death and disability, but the risk of maternal morbidity and disability, often from preventable causes, also increased substantially. (Children's Defense Fund, 1990b, p. 14).

The 1989 rate of infant mortality in Michigan was 11.1 deaths per 1,000 births (Center for the Study of Social Policy, 1992). Using the 1990 figure of 153,080 births, 1,669 infants died

at birth or within the first year of life. **Their contribution to the state tax coffers would have been 45.8 million dollars during the course of their lives.** Although this figure represents the loss of tax revenue during a lifetime it can also be interpreted as the per year loss to the state if the rates of tax and infant mortality are fairly stable. That is, while the loss of taxes from a child who died this year will be spread out over the next 6 or 7 decades, this year the state is deprived of tax collections from all children who died during the last 6 or 7 decades. If the tax rate and infant mortality rate are reasonably stable (or change in compensating ways), the per year loss will approximate the lifetime loss from an annual cohort.

In addition to infant mortality due to health problems, children are killed each year by their adult caretakers. The National Committee for the Prevention of Child Abuse (NCPCA) conducts an annual survey to determine the number of child fatalities due to child abuse. They report that, nationally, 1,211 deaths were directly attributable to child abuse during 1990 (Daro & McCurdy, 1991). Michigan has not responded to the NCPCA survey with fatality information since 1986. However, in 1985 and 1986 Michigan averaged 1.32 percent of the national total. Using this figure, it is estimated that 16 children died in Michigan in 1990 due to child maltreatment. Following the same logic used to calculate the cost of infant mortality, **these 16 deaths cost the state of Michigan \$430,992 in lost tax revenue.**

Medical treatment of injuries due to abuse. Not all abused children require hospitalization or medical treatment. Michigan's social service records do not provide summary data on this variable. Nationwide, about 3.2 percent of abused children require hospitalization for serious injuries such as skull fractures, broken bones, internal injuries, poisoning, and burns (Daro, 1988). Applying this percentage to Michigan's abused children (26,366) yields an

estimated 844 children requiring hospitalization. According to data from Blue Cross/Blue Shield of Michigan, in 1991 the average stay in hospital for Michigan children with injuries or poisonings was 4.5 days and the average cost per child was \$5,498 (Blue Cross/Blue Shield, personal communication, 1992). Using these figures, hospitalization costs directly attributed to child abuse in Michigan are 4.64 million dollars annually. No statistics were found to estimate the extent of abuse related injuries requiring medical treatment short of hospitalization. It seems conservative to assume that an additional 5% of all children from abusive households would require either medical examinations to aid in the investigation of the abuse referral or outpatient treatment for injuries not serious enough to require hospitalization. Blue Cross/Blue Shield of Michigan paid an average of \$172 dollars for outpatient treatment of injuries and poisonings during 1991 (Blue Cross/Blue Shield, personal communication, 1992). Thus, 1,973 children received treatment costing a little over a third of a million dollars. **Therefore, the total medical costs due to child abuse in Michigan are 4.98 million dollars annually.**

Special education costs. Suffering abuse puts children at greater risk for many difficulties throughout their lives. The National Clinical Evaluation Study identified several of these difficulties.

- \$ Approximately 30% of abused children have some type of language or cognitive impairment;
- \$ Over 50% of abused children have socioemotional problems;
- \$ Approximately 14% of abused children exhibit self-mutilative or other self-destructive behavior;
- \$ Over 50% of abused children have difficulty in school, including poor attendance

and misconduct;

\$ Over 22% of abused children have a learning disorder;

\$ School-based special education services cost approximately \$655 per child annually (Daro, 1988, p. 154).

With these figures in mind, it is estimated that one quarter of all children from abusive households will receive some special education services for at least one year between kindergarten and twelfth grade. Under these assumptions it costs the state of Michigan **6.46 million dollars for special education services delivered to child maltreatment victims.**

Protective Service costs. During fiscal year 1992, the Protective Service division of the Michigan Department of Social Services had staff-only costs of 26.5 million dollars. Other DSS expenditures brings **the total Protective Service expenditure in the area of child abuse to 37.9 million dollars** (Public Act 111 of 1991, State of Michigan). During 1991, they received over 100,000 reports of child maltreatment and conducted over 50,000 investigations. As mentioned before, this work substantiated nearly 16,000 cases of child abuse involving 39,452 children.

Foster care costs. In an average month during fiscal year 1990 the foster care system of Michigan served 14,604 children with out-of-home placements. The average cost of this service was \$1,347 per child per month (MI Department of Social Services, 1991, Tables 1 & 2). Not all abused children are placed in foster care. Daro (1988) cites a figure from the American Association for Protecting Children that only 18% of abused children are actually removed, even temporarily, from their home. Herrenkohl and Herrenkohl (1981) report that in their research

with 1,118 children from abusive homes 45 percent of the children spent time in foster placement. Applying the more conservative estimate (18%) to the number of Michigan's children living in abusive households suggests that 7,101 children are placed in foster care each year as a consequence of child abuse. The average stay within the foster care system for these children is 7.68 months (Daro, 1988). Putting all this together, 7,101 children staying in foster care 7.68 months at a cost of \$1,357 per child per month, **Michigan spent 74 million dollars on foster care placement of children affected by child maltreatment during 1990.**

Juvenile justice system. The relationship between child abuse and later criminal activity has been well publicized. In some studies, nearly 80% of all incarcerated juvenile offenders report a history of child abuse or neglect. However, that does not mean that 80% of all maltreated children will go on to be involved with the legal system. Indeed, the majority of abused children will never be involved in criminal activity. McCord (1983) studied the long term consequences of child abuse and neglect and found that approximately 20% of abused children were convicted for serious juvenile crime such as theft, auto theft, breaking and entering, burglary, or assault. Lewis et al. (1989) also concluded that 20% was a reasonable figure to use after a review of the relevant literature.

It is difficult to calculate the cost of this involvement. There are at least three different systems that are involved with juvenile crime: the police, the courts, and corrections. While no cost estimates were available for the first two systems, it costs \$172.51 per day or \$62,966 per year to incarcerate a youth in Michigan's corrections system (Department of Social Services, 1992). During 1991, the average length of incarceration in juvenile residential facilities was 15 months. We know that not all children involved in the juvenile justice system end up

incarcerated in residential corrections facilities. If we assume that only one-third of all convicted juvenile delinquents serve time in a residential corrections facility, then 2,630 Michigan children from abusive homes are so incarcerated. Under these assumptions, **the state of Michigan spends 207.0 million dollars annually to incarcerate children from abusive households who become involved in juvenile delinquent behavior.**

Adult criminality. It gets more difficult to trace a direct causal path between child abuse and its consequences as the time since abuse increases. Yet we know that child abuse can--and does--have life-long effects. One of those effects is a higher risk for adult criminality. During the 1970's several studies were conducted examining the relationship between juvenile delinquency and later adult incarceration (summarized by Loeber & Stouthamer-Loeber, 1987, Table 12.9). Each study found a slightly different rate, but on average 25.3% of juvenile offenders are later incarcerated as adults. If 20% of children from abusive homes are involved in juvenile delinquency and 25.3% of these go on to adult criminality, then it is predicted that 1,996 of Michigan's 39,452 children from abusive homes will become involved in the adult criminal justice system. Again, it is difficult to calculate police and court costs, but incarceration of an adult in Michigan prisons costs \$25,000 per prisoner, per year. In Michigan during 1990 the average prison sentence was 3.5 years (MI Dept. of Corrections, 1992). Therefore, **adult criminality related to child abuse costs Michigan 174.65 million dollars annually.**

Psychological problems. The psychological effects of child abuse can be severe and long lasting. In her forty year follow-up of abused boys, McCord (1983) found that, "Among the 97 neglected or abused children, 44 had become criminal, alcoholic, mentally ill, or had died before

reaching age 35" (p. 269). Maltreated children are routinely found to have poorer psychosocial adjustment than children from non-maltreating homes (Lamphear, 1986). Although there is ample documentation that child maltreatment is associated with higher levels of psychological maladjustment, there are very few studies that examine formal help seeking from the mental health system among maltreatment victims. For example, a study by Scott (1992) found that victims of childhood sexual abuse were nearly four times as likely to develop an adult psychiatric disorder than were non sexually abused children, but there was no data regarding the formal treatment of these disorders.

In the absence of any statistics to estimate how many children from abusive homes will need psychological services as children or seek such services as adults, very conservative assumptions were made. It is assumed that one percent of these children will require inpatient psychiatric hospitalization during their lifetime as a direct result of growing up in an abusive environment, while five percent will receive outpatient therapy for these same reasons. The duration of outpatient treatment is assumed to be 20 sessions--a common limit of insurance coverage for mental health treatment. The average duration of inpatient treatment for patients in Michigan's public mental health hospitals is 110 days (Michigan Department of Mental Health, 1992). This average includes both children and adult inpatients and is therefore an underestimate for the length of hospitalization for children, since they tend to have longer hospitalizations than adults. In Michigan, inpatient treatment for children costs approximately \$330 a day. For adults, daily inpatient costs are approximately \$270 (Michigan Department of Mental Health, personal communication, 1992). There is no way to estimate when children from abusive homes will need this service, so an intermediate figure of \$300 per day was used in this calculation. In Michigan, outpatient therapy costs approximately \$75.00 an hour or \$1,500 for 20 sessions. If

the assumptions about the use of these services are correct, **psychological care for child maltreatment victims in Michigan costs 16.00 million dollars annually.**

Total costs. Summing the costs outlined above yields the following conclusion: **During one year in Michigan over 823 million dollars are spent on the long- and short-term consequences of inadequate prenatal care and child abuse.** This money comes from a variety of sources, including state coffers, private insurance companies, and personal funds. Regardless of where it comes from, this money could be saved or put to other uses if adequate prenatal care could be provided and child abuse could be prevented. We now turn to the prevention side of the cost-benefit equation.

Costs and Effectiveness of Prevention

Preventive intervention programs in the area of child abuse and neglect vary in both content and delivery modes. However, this variety can be organized into three generic types of interventions: family home visitor programs, parent education programs, and interventions designed to make children less vulnerable to abuse. Family home visitor programs bring the intervention to the families who need it. Such programs tend to emphasize outreach and seem particularly well-suited to populations of families who might be unwilling or unable to participate in more formally organized services. These programs usually have some combination of educational, supportive, or empowering goals for the families they serve. Home visitor programs may involve only a few visits or may last for five years or more. Parent education programs are more likely to be organized in an "academic" way, with planned "lessons" delivered to individuals or small groups. These programs have definite educational goals in areas

such as pregnancy and delivery, child growth and development, or parenting skills. These programs may be accomplished in as few as one session or may go on for years with very elaborate curricula. Usually, the program recipient comes to a program site rather than the program being delivered in the family's home. Child interventions are designed to make children less vulnerable targets for abuse. Sexual abuse prevention programs that teach children self-protective skills are the most popular kind of program in this category.

Within each category of program there may be significant variation in both style and content. However, for the purposes of this paper this trichotomy will make a cost accounting possible. Data from programs funded by Michigan's Children's Trust Fund (MCTF) during the past several years were used to determine the cost of prevention. During that time, MCTF funded programs in all three categories--family home visitor, parent education, and child interventions. As might be expected, there was overlap in the "per unit" cost of the three types of programs. On average, however, the family home visitor programs were most expensive (\$324 per family, 1990-1991 MCTF costs), following by parent education programs (\$253 per family, 1990-1991 MCTF costs), and child intervention (school-based sexual abuse prevention) programs (\$2.14 per child, 1987-1988 MCTF costs). These figures represent only part of the cost of delivering these services. MCTF requires grant recipients match the MCTF grant with local funds and in-kind donations. The total costs for these programs were; \$950 for home visitor programs and \$473 for parent education programs. Comparable figures for the child intervention programs were not readily available.

The evaluation of program effectiveness in the area of child maltreatment prevention typically involves the measurement of some short-term changes in program participants rather than the direct measurement of changes in child abuse incidence. These short-term changes are

in areas that are thought to mediate the occurrence of child maltreatment. For example, since some cohorts of abusive parents have been found to be socially isolated (Oates et al., 1979), programs often aim to increase parental involvement in their social networks. Increased involvement is believed to reduce the likelihood of future child maltreatment. Similarly, since some abusive parents have been shown to be deficient in their knowledge of child development (Dubowitz, 1986), many prevention programs aim to increase such knowledge in the hope of reducing abusive risk.

Evaluations such as these are critically important. They inform program staff and help them design effective programs to reach their short-term goals. They also help in the quest to understand the causes of child abuse. However, as helpful as these evaluations are, they are not a substitute for evaluations that actually demonstrate the impact a program has on the incidence of child maltreatment. To complete the cost-benefit analysis of prevention programs it is necessary to judge a program's effectiveness in this way.

Fortunately, several such evaluations have been carried out, although not in Michigan. Table 1 provides information about how each of these programs has had an impact on child abuse rates. The results of these studies are equivocal. Although all of the programs showed some change in abuse rates, many of these changes were not statistically significant. The largest program (Healthy Start in Kansas) did show a significant decrease in the number of maltreatment cases. Other programs (e.g., Olds et al., 1986) showed significant decreases in child abuse rates among certain subgroups of program participants. The data in Table 1 suggest that modest to moderate reductions of the rate of child maltreatment can be achieved by preventive interventions.

Table 1
Evaluations of prevention programs that examined changes
in incidence rates of childhood maltreatment.

REFERENCE	TYPE OF PROGRAM	RESULTS
Gray et al., 1976; 1977	Home Visitor	High risk, intervene, N=50, 12% reported for abuse or neglect within 2 years compared to 4% of the high risk, non-intervene (N=50) and 0% of a low risk, non-intervene (N=50). These results are not statistically significant. Five children in the high risk non-intervene group required hospitalization due to child abuse compared to none in the intervene group, suggesting the abuse was less serious in the intervention group.
O'Connor et al., 1980	Early Contact with Newborn	Early contact group (N=143) had 0.7% referred to P.S. for maltreatment within 1.5 years compared to 3.5% of comparison group. This difference is not statistically significant.
Olds et al., 1986	Home Visitor	Group visited by PH nurse for two years had a 5% maltreatment rate by year 2. Comparison group had a 10% rate. This difference is not statistically significant.
Siegel et al., 1980	Home Visitor plus Early Hospital Contact	Early contact only (N=50) group had 6.0% abuse rate within one year of birth. Home visit only group (N=53) had 13.2% abuse rate, combined contact and visit group (N=106) had 6.6% rate, comparison group (N=112) had 5.4% rate. These differences are not statistically significant.
Simmons, 1986 (Healthy Start-Kansas)	Home Visitor	Compared to counties without, counties with home visitor program had an increase in the number of abuse reports but a decrease in the number of substantiated cases (15% vs. 26% statewide).

The Michigan Department of Public Health reports there were 60,626 live births to first time mothers in Michigan during 1990. This group is an ideal target for a comprehensive child abuse prevention program for two reasons. First, these parents are usually very receptive to parenting interventions at this time (Helfer, Bristor, Cullen, & Wilson, 1989) and, second, by serving all new parents, one eventually reaches the entire population of families with children.

To offer a comprehensive parent education program to every family having its first baby in the state of Michigan would cost 28.67 million dollars. To offer a home visitor program to these same families would cost 57.59 million dollars.

The Cost-Benefit Analysis

The costs of child maltreatment and some of its consequences have been presented, as have the costs of prevention programs. The costs of the two types of prevention efforts, home visitor and parent education programs are, respectively, 3.5% and 7.0% of the 823 million dollars estimated earlier as the cost of child abuse. **To mount a hybrid prevention program, where every Michigan family having their first child receives either one of these two services for a cost intermediate between the two individual programs (i.e., \$711.50 per family annually), would cost 43.13 million dollars annually. This figure is just below one nineteenth of the cost estimate for abuse (5.24% vs. 5.26%).**

It's clear from the data presented in Table 1 that even the most effective prevention program will not reduce the incidence of child abuse to zero. However, figures presented in this paper show that even small reductions in the rate of child maltreatment can make prevention cost effective. The same can be said for reductions in the rate of low birthweight babies. An Office of Technology Assessment report suggests that reductions in the rate of low birthweight between

0.07 and 0.20 percent would be enough to offset the costs of universal eligibility for Medicaid for all pregnant women in poverty (U.S.Congress, OTA, 1988b).

The cost benefit analysis presented above is based upon several choices. First, each of the MCTF home visitor programs used for the prevention cost estimate made extensive use of volunteers to deliver the services. Programs that use paid staff to deliver these services will certainly be more expensive. Second, the prevention costs were calculated for programs that were 12 months in duration. Prevention programs that offered longer interventions would, of course, be proportionally more expensive. Yet even these factors could easily be accounted for without jeopardizing the cost effectiveness of prevention compared to the costs of treating the consequences of child maltreatment.

The case for prevention is persuasive. Not only is it the humane approach, it is the financially responsible approach. Programs designed to prevent child maltreatment serve society in several ways: they build stronger, healthier children; they reduce the burdens on state services such as education, law enforcement, corrections, and mental health; and they free money to be spent on more life-enhancing projects. An ounce of prevention truly is worth a pound of cure.

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child abuse prevention programs. services provided by health, education and many other systems. inquiries and reviews into child protection services across Australia. There are also the longer-term costs of child abuse and neglect that include reduced quality of life and the increased need for specialist services for adults who were abused as children. The cost of operating youth justice systems across Australia provides yet another example of an indirect financial cost of child abuse and neglect to the community. A recent Victorian report found that children and young people who suffer child abuse and neglect are over-represented in youth justice systems (Victorian Government, 2018). It also investigate whether childhood abuse correlates with the length of receipt among program users. Women experiencing both physical and sexual abuse during childhood were 16%–25 percentage points more likely than others to use both cash and in-kind programs as adults. Conditional on program use, there was no relation of childhood abuse to the extent of program use during the study period. Keywords. welfare programs domestic violence child abuse Aid to Families with Dependent Children (AFDC) Food Stamp program. JEL Classifications. I3 I12 J1. Caldwell, Robert A. 1992 The Costs of Child Abuse vs. Child Abuse Prevention: Michigan's Experience Michigan Children's Trust Fund Lansing, MI Google Scholar.