NORTH CAROLINA CHILD RESTRAINT PROGRAM: PROGRESS REPORT ON EDUCATION AND DISTRIBUTION ACTIVITIES

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ABSTRACT

Each year in North Carolina, traffic accidents claim the lives of 20-30 children aged less than six. In addition, hundreds more children are seriously injured, sometimes permanently. In an effort to alleviate this problem, the North Carolina Governor's Highway Safety Program (GHSP), the University of North Carolina Highway Safety Research Center (HSRC) and other concerned groups have been involved since October 1977 in various programs aimed at educating parents of the problems inherent in transporting children in cars and of the need to protect their children with crash-tested safety seats and seat belts.

Recommendations for improving this educational program made in previous GHSP/HSRC project reports and in the current contract call for (1) improvements in the overall coordination of the program, (2) expansion of educational, distribution, and legislative activities, (3) inputs from out-of-state child safety programs, (4) improved coordination between involved state agencies, and (5) building flexibility into the program such that individual needs of localities can be met.

A formalized plan has been implemented which is allowing GHSP/HSRC to achieve these goals by providing for successful interaction with all other state and local agencies who are becoming involved in the child safety area. Stated goals are for the most part being met primarily because all programs are being run through one central agency, the Governor's Highway Safety Program, and because one agency, the Highway Safety Research Center, is primarily responsible for coordinating the implementation of these programs.

This report details the specific tasks implemented in each of the major areas of effort--health care and public education, local loaner programs, county

programs involving foster children, and developing potential community-based support for possible legislation. Major accomplishments during the past year include:

1. Distribution of over 60,000 brochures and material through more than 200 doctors' offices, health clinics and other local agencies.

2. Development of two "how-to" manuals for local groups interested in beginning loaner programs and the implementation or expansion of programs in five localities.

3. The planning and implementation of the wards-of-the-state program including a survey of all counties and implementation in seven local county agencies.

Analysis of accident data from police reports and fatality data from the Office of the Medical Examiner indicate a slight increase in restraint usage (from approximately 5% to 7%) and a slight decrease in annual fatalities. These positive changes continue to be linked with a very disturbing large difference in usage rates between infants and toddlers. Additional findings reinforce the benefits gained from usage of conventional lap and shoulder belts when a child restraint device is not available.

Finally, recommendations related to future N.C. efforts are provided with emphasis on the need to continue to expand the program on all fronts while insuring local community inputs to the planning process and direct participation in the program.

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INTRODUCTION

A study of public health problems involving children in North Carolina indicates that the single leading threat to the health of a child below the age of six is the automobile crash. In this regard, North Carolina is much like the rest of the nation, as indicated in Table 1 below, taken from the National Safety Council Accident Facts Publication.

Table 1. Leading causes of deaths for United States children aged 1-4 in 1979.

Cause of Death	Death Rate*
Motor vehicle accidents	10
Congenital anomalies	9
Drowning	5
Fires, burns	5
Cancer	5
Ingestion of food, objects	1
Falls	1

*Deaths per 100,000 population

(Source: "Accident Facts, 1979 Edition," National Safety Council)

Statistics specific to North Carolina collected from police accident reports from the Division of Motor Vehicles and from fatality and injury reports from the office of the Chief Medical Examiner indicate that motor vehicle accidents result in between 20 and 40 deaths per year across our state. In addition, while fatalities are perhaps the most disturbing aspect of this issue, it is also further estimated that there are approximately 300 to 400 children between 0 and 6 who are seriously injured each year.

In fact, study of the death rates associated with common diseases which parents have their children immunized against indicates that a North Carolina child between 0 and 6 is 40 to 50 times more likely to die in an automobile crash than from all of the common diseases combined.

Table 2. North Carolina death rates for preventable diseases for children aged 0-4 in 1978.

Cause of Death	Death Rate
Motor Vehicle Accidents	16.2
Congenital Rubella	0.0
Measles	0.0
Polio	0.0
Diptheria	0.0
Tetanus	0.0
Whooping Cough	0.0

Deaths per 100,000 population, ages 0-4

Thus, while the state is doing an acceptable job of protecting the young against diseases (a past threat to health to this part of our population) it is not doing an acceptable of protecting its young against the current leading cause of death - the motor vehicle accident.

Since October, 1977, the Governor's Highway Safety Program, the University of North Carolina Highway Safety Research Center, and other concerned groups across the state have been involved in programs aimed at educating parents concerning the realities of this accident-related threat to the health of their children and providing the fact that child safety seats are available today which could reduce fatalities and serious injuries greatly.

Data drawn from other states in the U.S. and from foreign countries indicate that child fatalities in motor vehicle crashes could be reduced by between 50% and 90% if properly designed and properly installed crash-tested devices were used. Thus, if all of the 171 children age 5 or less who died since 1974 in North Carolina automobile crashes had been properly secured, at least 136 would still be alive today.

Unfortunately, data on the usage does not indicate great progress has been made. A more detailed analaysis of these data will be presented in later sections of this report. The best estimate of usage in crashes based on surveys conducted by the Highway Safety Research Center indicates that usage rates have varied from 4.6% to 7.0% over the past six years.

Table 3. Restraint usage for 0-5 year old occupants in North Carolina crashes.

Year	% Restrained
1974	5.4%
1975	5.0%
1976	4.6%
1977	5.9%
1978	4.7%
1979	7.0%

Thus, analysis of this crash data indicates that even in cases where at least a belt system is available in a passenger car, the child occupants are not restrained by the driver in over 93% of the cases.

An even more disturbing fact in earlier years (1974 - 75) was the fact that even in cases where the driver of a passenger car was using a belt, the child sitting in the seat with him or her was belted in only one-third of the cases. In two-thirds of the cases in which the driver put a belt on himself or herself, he or she failed to restrain the child occupant. Thankfully, these data have changed somewhat as is shown in Table 4. Here, based on observational studies, it appears that the small group of drivers who now use adult restraints (5 - 10%) may well be restraining their children much more often than the average citizen. However, the size of this group using belts themselves is so small that the overwhelming proportion of unprotected children in crashes still exists.

Thus, a problem has been recognized by North Carolina Highway Safety authorities and concerned groups. The problem involves the fact that children riding as occupants in passenger cars across our state are being needlessly seriously injured or killed due to the fact that they are not being protected by the adult drivers in the cars. The remainder of this report details efforts conducted by Highway Safety Research Center and funded by the Governor's Highway Safety Program aimed at attempting to overcome this problem.

PURPOSE OF THE COUNTERMEASURE PROGRAMS

This problem of unprotected child occupants has been attacked on three basic fronts -- through education programs, restraint distribution programs, and legislative activity. During this current project year these countermeasure activities were implemented through two separate projects, the first entitled "Increasing Child Restraint Usage Through Physician and Public Education" (80-04-01-L-E-306-1) which was a continuation of activities started in earlier years and which began on October 1, 1979, and a second entitled "Child Restraint Local Distribution Programs" (80-04-01-L-E-306-2) which began at the end of March, 1980. The first project is primarily aimed at education, particularly education through health-care professionals, with additional public information and education aimed at small public groups. In addition to the educational activities, the project was also to include some planning for and initial outreach to local communities in an attempt to begin to establish loaner activities -- activities in which the local community groups would rent seats to parents at a lower than purchase price. The second project is more directly involved with this latter area of establishing community-based loaner programs and county-agency based child-protection programs across the state. The details of progress to date, problems encountered and solutions proposed and implemented for both of these projects are included in this report. This combining was done because it is often quite difficult to separate educational activities from loaner program activities. The two are both integral parts of the overall program aimed at increasing usage in North Carolina. Without education, no loaner program can be expected to function efficiently.

While details of progress to date and problems and solutions encountered in both of these projects will be provided in the following narrative, it is of some interest at this point to briefly discuss the overall state coordination

plan in the child restraint area to provide the reader with an overview of how involved agencies work together toward the common goals. A schematic of this coordinated plan is shown in Figure 1.

As shown, the North Carolina program involves a number of different state, local and private agencies. The Governor's Highway Safety Program is the funding agency for the majority of the work and is responsible for overall program management and monitoring of program activities. In addition, the public information and education section at GHSP serves to provide planning and liaison inputs to the HSRC PI&E programs and to other North Carolina Department of Transportation public information activities.

Because of the fact that it is the single agency funded to conduct most of the work, HSRC is shown to be the focal point for many of the activities. However, although most of the activities are coordinated through HSRC (to insure a single coordination point for planning inputs as well as direct aid), aid and inputs to program implementation are also received from the Department of Human Resources, the North Carolina Public Health Association, the North Carolina Pediatric Society, other state medical societies, the state headquarters of various civic groups, and various local health care and service groups.

The five major functions at HSRC include distribution programs, education programs, legislative liaison activities, public information and education programs/and a series of local community programs which HSRC is funding out of its own funds for the Chapel Hill-Orange County community. In order to ensure that all available HSRC expertise is brought to bear in all problem areas and because of the demand for training classes, all staff work in all program areas. However, in order to provide better coordination of activities, individual staff members have been assigned as principal coordinators of each of these five areas.

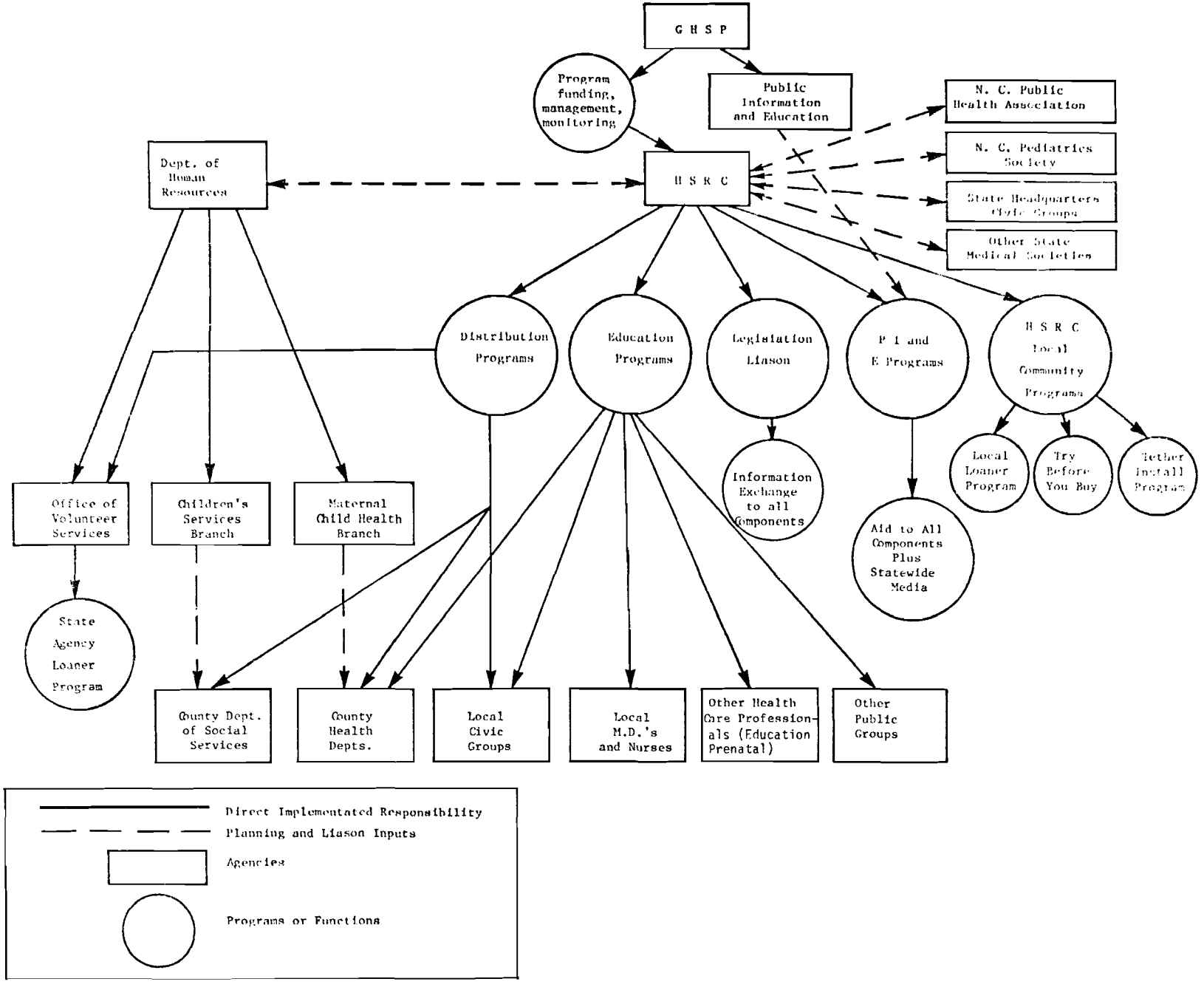

Figure 1. North Carolina Child Restraint Coordination Plan.

As shown by the solid arrows under each of these five program areas, HSRC has direct program implementation responsibilities in a number of areas including county departments of social services, county health departments, local civic groups, local health care professionals, and other public groups. The only area in which the coordination is handled somewhat differently is the state agency loaner program. In this area the office of Volunteer Services in the Department of Human Resources will work directly with GHSP and HSRC in organizing and planning the program and then will take full responsibility for implementation of the program. Finally, not pictured on this chart are the actual programs conducted in and by these county and local agencies. Each of these functions will be explained in detail in the following narrative. In addition to aiding these local organizations through education and direct aid, HSRC also receives a great deal of input from the agencies and groups related to problems and needs at the local level. Through continual contact with these local groups, these planning inputs will continue to be requested and used.

Thus the North Carolina child restraint program is a program with overall coordination responsibility lying in the hands of the funding agency, the Governor's Highway Safety Program. In order to help ensure that the different activities work together efficiently, the Highway Safety Research Center has been chosen to serve as the single coordinating point for the overall program. As noted above, however, other agencies, particularly the Department of Human Resources and various local groups, are playing a very important role in both shaping and implementing the specific program modules.

The following narrative will provide the details of the progress to date in all areas covered in both of the above references projects. For clarity of presentation, this discussion will be divided into (1) the primary education activities, (2) the loaner program activities involving civic groups and county

or city agencies, (3) activities involving protection of wards of the state (foster children), and (4) limited information concerning activities involving other special groups of children (e.g. pilot programs with handicapped children).

EDUCATIONAL ACTIVITIES

Overview and Progress to Date

Educational activities have been viewed from the inception of this project as being the primary purpose of the overall efforts and the key to project success. In order to convince health care or civic groups to set-up and operate distribution programs, members of these groups must be educated concerning the serious risks faced by children in cars and concerning the fact that they can help alleviate the problem. Distribution programs can be set up and legislative activities can be initiated, but unless the general public, and more importantly health and safety educators, are made aware of the magnitude of the problem, these activities would be destined for failure even before they were started. Thus, the primary efforts for the long-term duration of these projects have been in the education area.

Before the various components of the educational materials and campaign are summarized, it is necessary to discuss the rationale behind focusing on health educators and treating automobile deaths as a health problem rather than a highway safety problem.

While public education concerning general seat belt usage for adults has not been shown to be an effective program in the cases where it has been studied (and as evidenced by the national seat belt usage rate of fourteen percent), the results of research aimed at education provided by pediatricians and other health care educators to parents of newborn children have been mixed. Three articles appearing in the September, 1976 issue of Pediatrics concerning controlled studies of educational programs conducted by pediatricians indicated that the purchase and use of a proper restraint system by parents could indeed be influenced by the pediatrician in the pre- and post-natal stages (Lieberman,

et al., 1976; Kanthor, 1976; Allen and Bergman, 1976). Usage of restraint systems in these cases was shown to increase from 60 to 90 percent. These optimistic studies helped to form the rationale for HSRC's strategy of attempting to educate parents through physicians. However, it must also be noted that two studies published after this project was conceived have indicated very limited effects attributable to physician-education efforts (Miller and Pless, 1977; Reisinger and Williams, 1977). While one of these studies was a questionnaire type with unusally high baseline usage rates, the other was a well controlled observational study of a "one shot" educational effort. Even with this evidence, it is felt that the conflicting results indicated by the different studies at least showed some promise for this approach.

Physician participation in such safety-related programs is often keyed to a shift from the more traditional disease-oriented bias into a total public health-oriented bias. In such an approach, deaths due to automobile accidents are presented to the doctors as being analogous to a disease for which an effective immunization (child restraints) is available. The physician must be convinced that it is his or her responsibility to provide such information to parents and indeed that the distribution of such information will benefit the child's health.

Since the original project was aimed at reaching North Carolina parents through various health care professionals, it was imperative that the advice and cooperation of several representatives of the health care professions be sought while planning the project. One of the most important and useful aspects of this project has been the formation of an advisory committee for assistance in developing materials and in recommending appropriate physicians to contact. This nine-member advisory committee consists of representatives of the North Carolina Department of Human Resources (Maternal and Child Health and Highway

Safety Branches), the North Carolina Medical Society, North Carolina Jaycettes Buckle-Up-Babes project, Office of the Chief Medical Examiner, North Carolina Memorial Hospital Pediatrics Department, the North Carolina Governor's Highway Safety Program, and pediatricians in two private group practices.

Based upon the recommendations of the advisory committee, the following materials were developed for distribution to physicians and other interested individuals.

a) Four posters designed to attract the attention of parents and to interest them in asking their doctor for further information (see Appendix A).

b) A brochure to be given out to individuals by physicians or their staffs. This brochure briefly and concisely describes why restraints should be used and what features can be found on safe models, and lists the dynamically tested models which are available for purchase (see Appendix B).

c) Shopping guides for 30 North Carolina cities listing the price ranges of approved models available at local stores (see Appendix C).

d) A storybook designed for children which shows how animals protect their young while transporting them and how human parents should protect their children in cars (see Appendix D).

Both the brochure and the shopping guides are updated periodically to reflect changes in the types and prices of dynamically tested restraints available to North Carolina parents.

In addition to the materials described above, other supplemental information materials were prepared which were designed mainly to increase physicians' knowledge in the area of child restraints so that they can answer questions parents might ask. An eight-page monograph was written and distributed which is basically an expanded version of the pamphlet text. It goes into more detail concerning the extent of the problem regarding children in

cars, the types of restraints that are available and how they work, and the features to look for when purchasing a restraint.

Physicians, and other health and safety educators, are being supplied with additional information to counter some of the arguments against safety seat use that they hear. Many parents seem to feel that their children would not like to be restrained in a safety seat and that there's really no need to secure their children since "it won't happen to me." Discussion with health educators, and parents, now include the results of a study by Dr. Ed Christopherson (1977) that shows that children who are secured in safety seats are much better behaved than unrestrained children (with good/bad behavior defined by parents). Theoretically, better behaved children should lead to fewer distractions for the driver which should lead to safer driving. HSRC researchers have in fact documented that each year at least 150 accidents are actually caused or contributed to by unrestrained children distracting the driver. Educators are now being given this information so that they can offer better behaved children and accident prevention as positive rewards for safety seat usage that parents receive each and every time they properly transport their children.

One of the most critical aspects of this project has been publicizing the fact that there is an on-going child restraint program in North Carolina and that materials are available to those persons who feel that they can use them. Two types of publicity have been used thus far--personal contact and Medical Society correspondence.

For personal contacts, we have relied primarily on recommendations of members of the Advisory Committee and officers in the N.C. Pediatric's Society concerning key persons in the state to talk with. Personal contacts with the representatives of various groups across the state resulted in invitations to attend meetings and present short informative talks outlining the need for the

use of child restraints and how the HSRC materials can be used. Medical groups to which project members have presented talks include:

- Annual meeting of the North Carolina Pediatrics Society
- Members of the Executive Committee of the North Carolina Pediatrics Society
- The Traffic Safety Committee of the North Carolina Medical Society
- The Committee on Trauma of the North Carolina Medical Society
- The Pediatrics Department of North Carolina Memorial Hospital in Chapel Hill
- The Pediatrics Department of Moses Cone Memorial Hospital in Greensboro
- Wake County Memorial Hospital, Grand Rounds Group
- Fayetteville Area Health Education Symposium
- Wake Medical Society, Traffic Safety Committee
- Members of Mountain Area Pediatric Society in Asheville
- Pediatric Residents at North Carolina Memorial Hospital in Chapel Hill
- Rowan County Medical Society
- Medical Staff of Orange-Chatham Comprehensive Health Services
- Cape Fear Valley (Fayetteville) Hospital pediatric interns and residents
- Charlotte Area Health Education Center sponsored workshop for Charlotte Memorial Hospital physicians and nurses

Nursing groups to which presentations were made included:

- Recreational therapists representing Duke, N.C. Memorial, and Wake Memorial Hospitals
- In service training session of public health nurses from eastern N.C. held in Greenville.

In addition, HSRC staff helped prepare a letter to be sent to every member of the North Carolina Pediatric Society. This letter, signed by the President of the Society, urged physicians to discuss car safety with parents and was accompanied by a sample brochure and instructions to contact HSRC for additional copies. Many pediatricians took advantage of this offer.

As was stated earlier, the primary educational strategy of this project has been to educate the public through physicians. At the same time, project staff were well aware of several facts. One was that some studies had shown pediatricians to have no more effect in convincing parents to use safety seats than anybody else. Even if physicians were able to affect usage rates, few physicians could realistically be expected to take the time to thoroughly educate parents and, perhaps more importantly, not all parents take their children to doctors for routine check-ups. Thus it was realized that strategies other than physician education would need to be employed.

Thus, it has evolved that a large part of the project has been to make the service of staff members available for making child pasenger safety presentations to non-medical groups throughout North Carolina. Anytime that HSRC was contacted for information about safety seats in general, or this project in particular, the fact that we would make these presentations was made known. When a staff member does make a presentation to a public group, all of the same educational materials are handed out and those persons present are urged to take the information home and discuss it with friends and family.

Non-medical groups for which presentations have been made include the following:

- Cary Jaycettes
- Garner Jaycettes
- Greensboro Jaycettes

- Greensboro Adoption Agency
- Automobile Dealers Association of Fayetteville
- Annual Meeting of the North Carolina Driver Training and Safety Education Association
- Safety Committee of the North Carolina Homemaker's Extension Service
- Davidson County Homemaker's Extension Service
- Edgecombe County Homemaker's Extension Sevice
- Surry County Homemaker's Extension Service
- Wilson County Homemaker's Extension Service
- Yanceyville High School Continuing Education Course
- Personal appearance on the Lee Kinard Good Morning show (Greensboro)

Special emphasis has been placed on providing services for groups in the Chapel Hill-Durham area. Within our own communities, presentations have been made for the:

- Durham-Chapel Hill Child Safe (child advisory) group
- Childbirth education (e.g. Lamaze) classes in Chapel Hill
- Durham-Chapel Hill Mothers of Twins Club
- United Church Day Care Board
- Odum Village afterschool nursery
- Chatham/Orange Childbirth educators
- Bear Creek and Cedar Grove Headstart parents' meetings
- St. Mary's Day School second grade
- Chapel Hill Day Care Coordinators
- Most civic groups in Chapel Hill: Civitan, Altrusa, Sertoma, Exchange, Kiwanis, Jaycees, Jaycettes, and Lions

Project staff members and other HSRC personnel designed and constructed a light box display and took the display and a videotape version of the Physicians for Automotive Safety film, "Don't Risk Your Child's Life" and the Insurance Institute for Highway Safety film, "Children and Infants in Car Crashes" to various meetings and conferences. Informal contact was made with health care and safety professionals by project staff manning the display at the following meetings/conferences:

- Annual meeting of the North Carolina Pediatrics Society
- Annual meeting of the North Carolina Public Health Association
- N.C. Department of Human Resources/UNC School of Public Health Families - Organizations - Children, Utilization of Services (FOCUS) conference
- Annual North Carolina Conferences on Highway Safety
- Assisted with the North Carolina Department of Human Resources booth at the N.C. State fair
- WBTV (Charlotte) Fair on the Square

In addition, posters and brochures were supplied to (but no personal presentation or display made):

- North Carolina Head Start Training Conference
- Durham, N.C. Day Care Council
- Winston-Salem Police Department display at the 1978 Dixie Classic Fair
- Cary Police Department display at Cary Village Mall
- Child safety exhibit by Asheville public library
- Surry County Homemakers Extension Service for county fair
- Nash County Homemakers Extension Service for county fair

During the spring of 1979, HSRC staff members conducted ten three-day workshops that were sponsored by the National Highway Traffic Safety Administration. These workshops were held in each of the ten national regions

to aquaint participants with the problems faced by children in cars, what types of safety seats are available for use by parents, and programs that can be used to encourage their use. In attendance at the workshop held in Atlanta was the Assistant Secretary for Children in the North Carolina Department of Human Resources (NCDHR). Due to her enthusiasm and concern generated by this workshop, the NCDHR decided to sponsor a series of child passenger safety workshops for North Carolina's DHR regions. These workshops turned out to be one of the most effective vehicles for generating specific local programs as well as general interest in this area.

NCDHR personel were responsible for making arrangements for the workshops as well as inviting persons to attend. HSRC project staff conducted the actual sessions. Invitations were extended to local health care professionals, civic leaders, and other interested parties. Attendees participated in a condensed one-day version of the three-day national workshops. NCDHR sponsored workshops were conducted in Wiston-Salem, Greenville, and Asheville with an additional workshop to be held in Fayetteville. Workshops sponsored by organizations other than NCDHR were conducted in Charlotte, Greensboro, and Goldsboro. In addition, HSRC staff participated in a legislative workshop held in Raleigh and sponsored by the Governor's Advocacy Council on Children and Youth.

In order to further disseminate information across the state concerning the value of properly used child restraints and to advertise the availability of informational materials, the project staff wrote scripts for radio and TV public service spots and articles for several newsletters distributed within North Carolina. Radio spots included an interview aired over station WPTF in Raleigh and a 60-second public service announcement sent to the North Carolina Department of Human Resources for distribution. Scripts and production assistance were provided for a series of television public service spots

produced and distributed to TV stations by the North Carolina Governor's Highway Safety Program. Short articles were written for and published in:

- "Epidemiology Notes" of the State Board of Health
- "The Child Advocate" of the Department of Administration
- "Healthwise" of Blue Cross and Blue Shield of North Carolina
- "State Line Mate" newsletter of the North Carolina Jaycettes
- "Highway Safety Highlights" of the UNC Highway Safety Research Center
- Newsletter of the North Carolina State Home Economics Extension Office
- Newsletter of the Governor's Advocacy Council for Children and Youth
- The Chapel Hill Newspaper

In addition to the articles written by HSRC, the University of North Carolina News Bureau distributed a news release concerning child restraints and the project to most North Carolina newspapers. THis release was picked up and printed by over two dozen newspapers across the state. Materials were also sent upon request to the Charlotte Observer for their use in preparing an article on automobile child restraints. WGHP-TV in High Point and WDTV in Charlotte were both supplied with information, interviews, and film clips that were used to prepare a special news segment on child restraints.

HSRC staff have worked with the GHSP and DOT public information staff in the development of two radio spots concerning North Carolina child safety programs. These have been distributed to over 300 radio stations across the state. In addition approximately 5-10 radio stations have called for telephone interviews to be used in their programming.

As a result of these various meetings, presentations, workshops, mailings, and other publicity, brochures and related materials have been sent to 586 physicians in different physicians offices, 42 hospitals, 113 other health educators, 74 civic groups, 7 local police departments, 98 city and county agencies, and 95 day care centers and other unclassified groups during the three years history of this project.

As a result of the article appearing in the HSRC "Highway Safety Highlights," transportation safety groups in other states and countries have contacted us asking for samples of our posters and brochures. The Government of Guam purchased 1000 posters for their own use, and the Traffic Safety Institute at Eastern Kentucky University purchased a set of negatives for the brochure so that they could distribute a slightly altered version there.

When implementing countermeasures in a relatively new area such as child restraint usage where the availability of previously published materials is limited, it is helpful to meet with other working professionals on a face-to-face basis. For this reason, the HSRC Child Restraint Project Staff and GHSP representatives attended (and helped conduct) Child Passenger Safety Conferences held in Nashville in May, 1978; in Washington, D.C. in December 1979, and again in Nashville in September, 1980. At the conferences, project staff members participated in workshops concerned with public information and education, legislation, and research as related to child restraint usage. These conferences were useful to the extent that they facilitated the exchange of information and ideas with members of other child restraint projects throughout the country and with manufacturers of the devices themselves. Project staff members also attended and presented talks at the Southern Safety Conference in Nashville, Tennessee, and at the State of Oklahoma Child Restraint Conference in Oklahoma City. Staff members conducted training sessions for the State of South

Carolina child restraint survey personnel and, as previously mentioned, conducted workshops sponsored by the National Highway Traffic Safety Administration in all ten of the NHTSA national regions. These national workshops brought together traffic safety and health care professionals as well as representatives of state and local agencies from all fifty states and the territories to establish and expand grass roots support for child restraint educational programs, distribution programs, and legislative actions. From these workshops, HSRC project staff gained valuable insight into materials and techniques which are being put to use in North Carolina.

Problems encountered in program planning and implementation.

One of the main problems encountered in planning this project was the relative lack of previously published research articles in the area of promoting child restraint usage. In the past, the special needs of young children have for the most part been ignored in the public education campaigns that promote the use of automobile seat belts. This being the case, one must make assumptions about these programs in relation to children. The basic assumption formed in this manner is that since public education campaigns have been shown to have little or no effect on seat belt usage rates for adults, there is little reason to believe that they would be highly successful in getting parents to properly restrain their children. Based on this assumption, previous studies have been centered on the efficacy of educating parents through their physicians, especially pediatricians.

As noted earlier, at the time that this project was planned, most of the available research indicated that pediatricians could indeed exert a positive influence on parents of children and could be seen as being effective focal points of countermeasures designed to increase child restraint usage. However, since that time, other studies have been reported that indicate that physicians

may not have any more influence over peoples' behavior in this area than do other safety experts. These contradictory results made it extremely difficult to plan an efficient and effective educational program. However, it may be the case that these contradictory results strengthened and benefitted the HSRC program in that it was realized that it would not be wise to put "all of our eggs in one basket" with that "basket" being pediatric education. In fact, HSRC survey results showed that while we measured an overall increase in safety seat usage at our survey sites, there was little evidence that pediatricians had any more effect on increasing usage rates than did any other factor (see Hall et.al., 1980). Since HSRC staff were aware that pediatric education may not be as effective as hoped, we were able to expand our project to include the several different approaches.

Other problems have been encountered in implementation of the program. During the first few months, it was felt that individuals and groups would be more receptive to the program if they were to first contact us and invite us to speak --- if they were to initiate the request. Even though the existence of the project was fairly well publicized, there were few requests for either speakers or materials. As a result of this situation, a shift in tactics was employed in which the project staff began to actively and aggressively solicit speaking invitations and requests for materials.

Another major problem encountered in implementing the program concerned the design and printing of materials to be distributed to physicians. It was felt that the child restraint pamphlets available at the time from outside sources were either too expensive or could be improved by tailoring them more to North Carolina's problems and needs. This led to the decision to produce our own pamphlets outlining the needs for using crash-tested child restraints. The writing and re-writing of this pamphlet took longer than expected and once the

final version was ready for printing, we encountered enumerable delays in having them printed and returned to us. Small quantities of pamphlets were delivered over a period of two months which led to the situation where at times there were not enough pamphlets on hand to completely fill orders for them. Since the initial delivery, however, we have generally been able to keep enough brochures on hand so that minimal delays were encountered in filling requests. It has been difficult to accurately estimate how many copies to order for a given printing due to the rapidly changing technology in this field. The heart of the brochures is a list of crash-tested seats for parents to choose from. Since manufacturers have been constantly changing and upgrading the different models of seats, we were never in a position to order extremely large numbers of copies which would have ensured maintaining adequate supplies. Instead, we were forced to order smaller quantities per printing, but this enabled us to make needed changes in the brochure's content more often. Scheduling and delivery have improved dramatically since the initial project year.

HEALTH CARE AND SERVICE GROUP LOANER PROGRAMS

Overview of Loaner Program Concepts

Because of the fact that the reason often cited for failure to obtain and use a child safety seat is the perceived high cost of the seat, and because it is quite often possible to increase usage in a given geographic area by having local citizens become involved in a program of protecting their own children and the children of their friends, the second major mechanism used by HSRC and GHSP in attempting to protect North Carolina children involved the development of a methodology for planning and implementing loaner programs in communities across the state. While some of the planning and initial implementation of loaner programs was conducted before March, 1980, the major expansion of these earlier efforts has occurred since that time. Expansion in loaner program activities has basically been carried out through two mechanisms. The first mechanism involves the providing of direct aid to localities to defray the cost of starting up and administrating restraint recycling programs, specifically through purchase of equipment and educational materials. Any purchase of equipment is, of course, done only as an integral part of a well-planned total local education/distribution program. Basically the program works through identification of interested local consumer groups who agree to carry out the program and agree to obtain child safety seats. HSRC/GHSP then matches these seats on at least a one-to-one basis and provides all of the necessary training, contract information, and all other administrative forms needed implement the program.

Loaner programs (distribution programs) offer safety seats to parents for a deposit and a small rental fee. Infant car carriers or child safety seats can be loaned out to parents for a few months or several years. These loaner

programs provide communities with the means to offer families a low-cost opportunity to protect their children -- the community's future vital resources.

For the above reasons, greater emphasis was placed on working with service groups and health-care facilities to increase the number of loaner programs across the state and expand existing ones. Further reasons for emphasis on loaner programs were based on the following two points: (1) studies show that widespread public information programs alone will not increase restraint usage and (2) with the state's long term objective of having a law requiring that parents use child restraints while transporting their children in cars, HSRC felt it necessary to clearly show and assure legislators that all parents will be able to comply with the law regardless of economic status. Establishment of hundreds of loaner programs across the state are necessary to raise community awareness of the benefits of restraints and thus build grassroots support for a mandatory use law, and to show legislators that a state-wide network of loaner programs and related projects have already been established and are already providing seats to N.C. citizens (their constituents) prior to the passage of the law.

Child safety seat loan programs can be run by a variety of organizations, including service clubs, La Leche Leagues, childbirth education groups, day care centers, pediatric clinics, health departments, hospitals, hospital auxiliaries, health maintenance organizations, churches, safety organizations, and employers. They can be run as a public service with the rental fee set as low as possible just to cover costs or they can be run as fund-raisers to support additional activities. The following narrative details the steps followed in the statewide loaner activities.

Development of Materials

Our initial efforts to identify interested groups was through general correspondence. Through our continuous efforts to educate physicians who would in turn educate the parents, HSRC received daily letters inquiring about child restraint information. Most of the letters referred to hearing about our program from friends or seeing literature about child restraints prepared by HSRC in the doctor's offices. Word also spread that HSRC had information about establishing child restraint loaner programs.

DHR's regional child restraint workshops (explained in greater detail under section entitled, "Finding volunteer groups") also stimulated interest and a number of inquiries about loaner programs. With interest in establishing loaner programs mounting, HSRC felt the need to establish our own loaner program in order to have first hand experience in planning and implementing a program, and to convert this experience to a much needed step by step guide for setting up an infant car carrier loaner program for service and health care professionals. The following segment of this report provides background information about the model programs HSRC established in Chapel Hill and how these programs were utilized to develop our two Infant Safety Seat Loaner Program guides.

As we corresponded with various service organizations and health care groups, we noted that the interest in child passenger safety was very high. Presentations to these groups stimulated further interest and eagerness to establish loaner programs in their communities. However, when discussion turned to planning for and setting up a loaner program, many groups were overwhelmed by "all that had to be done". In several cases, groups opted to distribute literature rather than become involved in what seemed to be a very time consuming project. We received one illustrative letter that stated, "We are very disappointed to inform you that the Auxiliary voted against sponsoring a

loaner program. Considered was the strain on members' volunteer time with other activities." HSRC staff saw the need to eliminate as much work as possible in the setting up of a loaner program and to make it easy for groups to participate even with limited time and volunteers. Most groups asked if we had details on how to set up a loaner program. Initally we were only able to provide them with copies of the National Highway Traffic Safety Administration's (NHTSA) Early Rider Kit which offers excellent general information about loaner programs and how to operate them, but does not provide guides for setting up a file system, controlling inventory, demonstrating proper usage or handling seat rentals and returns -- all the things that take time to plan out and prepare. HSRC staff had gained valuable experience and knowledge while conducting the previously cited NHTSA Child Restraint Workshops across the country where we learned about the problems of running loaner programs from many people experienced in operating large successful programs. We decided to utilize this knowledge to enchance it with our own real world experience of setting up and running a loaner program on our own. From this model program we would prepare a step by step guide which would eliminate many of the unknowns and provide the needed tools to quickly implement the program for both service and health care groups.

Model Infant Car Carrier Loaner Program

In planning for this program HSRC decided to test out the feasibility of a cooperative effort among area health and social service agencies, civic groups and HSRC by establishing a loaner program targeted to low income families. This would enable us to not only develop a standard guide on how to establish an infant loaner program, but also provide information for other localities on how to stimulate agencies to participate in a "referral" loaner program.

Under this program, infant car carriers are loaned out to low income families for a period of up to 10 months at a rental charge of 50¢ a month. The local agencies inform the families about the importance of child safety seats, provide them with materials, and refer them to the Center's loaner program. The borrower pays only a $5.00 advance rental charge. The normal security deposit is paid by donations from local civic groups. At the end of the rental period, if the seats are returned in good condition, they are rented out again using the same initial donation money received from the civic groups as the security deposits for new rentals, thus allowing the civic clubs to sponsor additional families to participate in the program. (Initial contacts with these local civic groups were noted earlier. These included both formal presentations and follow-up at scheduled meetings.)

Model Buy-back Program

Because of both the limited number of restraints available and the goals of the project, in order to participate in the loaner program for low income families, parents have to be referred by one of the local health care and social services agencies. However, when word spread around the Chapel Hill community that HSRC was operating a loaner program, many other parents wanted to rent a seat from us. We did not want to change the basic intent of our initial program, offering seats to families that may not otherwise be able to afford to purchase seats, but we did not want to deny a seat to anyone. In order to resolve this issue, a "buy-back" program was established. Families wishing to rent an infant car carrier, but who are not referred by one of the local agencies are asked if they wish to participate in this program. If the parent purchases an infant car carrier that is the same brand offered in the regular program (a GM Infant Love Seat), the Center will buy it back after the baby has outgrown it. The family will receive half the cost of the seat up to

$10.00 if the seat is returned to HSRC within a year of the purchase date and if the seat is in good condition. In this manner, the parent is able to "rent" an infant carrier for $10-12, and HSRC can expand its inventory at low cost.

Model Try Before You Buy Program

HSRC has always recommended to groups who wish to set up infant loaner programs that upon return of the carriers, they should encourage parents to continue protecting their children by obtaining a child safety seat. We decided to establish a model try-before-you-buy program for the purpose of developing additional guides to groups who wish to expand upon their basic loaner program. In the Chapel Hill program, parents can rent a child safety seat for a period of up to two weeks for a rental fee of $1.00 and a deposit of $10.00. Upon return of the seat, an individual can take out another seat for the remainder of the two week period for no extra fee. Parents are able to select from a large array of crash-tested child safety seats which are locally available. This gives them the opportunity to try a variety of seats to determine which seat is the most comfortable for the child, best fits their family car, and is convenient for them to use, before they go out and purchase a seat.

Model Tether Installation Program

From observational surveys conducted by HSRC in 1978-79 it was found that approximately 35 percent of those using a child restraint device did not have it properly installed. The CRD was considered properly installed if:

a) the CRD facing in the right direction and;

b) the adult belt properly securing CRD and;

c) the top tether strap was used (if required).

There was no further breakdown on these three installation errors, but misuse of the top tether strap was a frequent occurrence. The first two errors can be corrected by education of the parents, but the tether does require a mechanical installation in the vehicle.

One of the recommendations made in the report "Increasing Child Restraint Usage Through Physician and Public Education", (January, 1980) was to attempt to institute tether strap installation programs run by local service groups to insure higher rates of proper usage. Therefore, as a part of the local model programs, the Center undertook the task of providing free installation of tether anchor brackets for child safety seats. It was found that this service was not readily available locally and no expertise seemed to exist on the specifics of installation of the anchor brackets. Upon inquiry to General Motors about problems with a newer vehicle, we received from them tether installation guides on several make and model GM cars, vans and pick-up trucks. While our primary goal of this effort is the providing of a necessary service to the community, HSRC is also attempted to use it as a information collection effort to learn the problems and gain knowledge and experience in the installation of the tether anchors in all make and model vehicles, particularly those which might cause problems to the consumer attempting to "do-it-yourself".

At this time the HSRC staff has installed anchor brackets in more than fifty different make and/or model vehicles. General instructions have been developed and an installation log is maintained in which, for each installation, an entry records owners name and address, along with car make and model, type restraint, where anchor bracket was installed and related comments. If any problems were encountered they would be noted in comments. (see Appendix E).

In addition to the log, a card file is maintained with sketches of the problem installations to show specific location of the anchor as well as other parts of the vehicle which have to be avoided such as gas tank, spare tire, brake lines, etc. The index file does not contain a sketch on every installation, because in some of the vehicles (especially sedans with a window ledge), the locations of the anchor was not critical, and the only criteria was to place the anchor directly behind the restraint. (see example, Appendix F).

The experience and knowledge gained from this local endeavor will enable the Center to assist and train others in the installation of anchors in the child safety seat loaner programs in other parts of the state.

As a result of our planning, implementing and operating the above model programs, HSRC developed two "how to" manuals entitled, "Infant Safety Seat Loaner Program: A Guide For Service Groups," and "Infant Safety Seat Loaner Program: A Guide for Health Professionals in a Hospital Setting." (Linda P. Desper, Beverly T. Orr, and Forrest M. Council). This guide can be used by individuals, volunteer groups, private companies, health care professionals, state agenices, etc. The major difference in the two manuals is the inclusion of a set of procedures for overcoming problems within the hospital bureaucracy and the tailoring of implementation steps to the hospital setting in the Health Professional Version.

The guides offer step by step instruction for a four phase loaner program. Phase I: Initial Planning and Development addresses how to identify the target group of children, how to develop a plan of action, how to develop support for the program, seek donations and purchase seats. Phase II: Final Planning and Training covers details on manpower requirements, space, supplies and equipment needs along with guidelines regarding the need for

training of participating members. Phase III: Implementation discusses how to inform the public about the program and how to initiate the loan and return procedures. Phase IV: Expansion of Basic Loaner Program offers project suggestions to groups who wish to enhance or expand their basic infant car carrier loaner program.

Much of the material presented in the first section of the manual was taken from the NHTSA's manual included in its Early Rider Program. Material was rearranged to provide for more realistic sequence of events and the information was updated where needed. Perhaps the most important and newly developed material in the guide is housed in the appendices. Many of the forms and instructions in the appendices were developed to make the setup and daily operation of a loaner program simple and less time consuming. Blank forms are provided so groups can zerox copies for their own use. By referring to forms showing hypothetical examples, they can ensure that they utilize the forms correctly. The appendices include forms or instructions on: a sample rental agreement, sample return reminder letter, sample shopping guide, instructions for setup and utilization of action files, child restraint inventory form, demonstration techniques, loaner program rate schedule, rental and return procedures, and sample child restraint evaluation survey.

Two hundred of these guides have been distributed to interested groups. Another 500 are being printed at this time. Initially, these guides were to be sent to all groups that were interested in promoting child restraint usage. Due to the cost of printing these guides and because of the fact that many groups wanted to only educate the public and not get involved in loaner programs, it was decided to limit distribution to those groups who were ready to plan a loaner program.

For those groups who initially inquired about distribution programs or related child safety issues, a packet of basic information was developed and is sent. The material, housed in a folder includes: (1) details on what the GHSP/HSRC Infant Safety Seat Loaner Program is all about and how to obtain free safety seats, (2) details on automobile safety seat liability protection, (3) sample copies of necessary contract and lease forms which enable organizations to participate in the program, (4) sample copies of reporting forms which organizations must submit to GHSP/HSRC if participating in the matching seat program and, (5) samples of educational materials available.

With the ever increasing number of groups requesting presentations on child passenger safety and the limited number of staff to make these presentations, HSRC decided to develop a "canned speech" which could be utilized by any group on a loan basis. The basic presentation addresses the problem and solution, the effectiveness of child restraints, and provides encouragement to parents to utilize these restraints to protect their children. A script and 24 color slides allows anyone to present the basic information to his or her group.

This script has just been revised to incorporate some new research findings and the slides have been sent off for duplication. Within two weeks the updated presentation package will be available upon request. HSRC also plans to provide eight sets to the Highway Patrol's Traffic Safety Information Unit and 4 sets to the GHSP for use by their field staff personnel.

Finding Volunteer Groups

As stated earlier our initial efforts to identify interested groups were through general correspondence. This is a continuing effort.

With greater emphasis being placed on working with service groups and health care facilities, HSRC did not want to limit ourselves to reaching only those groups who took the initial effort of contacting us. We wanted to expand awareness of our program and stimulate interest across the state to those groups who were not aware or were vaguely aware of the problem of children riding in automobiles.

The following text describes some of the avenues which have been persued to identify health care professionals and service groups who could operate loaner programs and thus increase statewide utilization of child restraint devices.

Regional Workshops

As stated earlier, HSRC worked cooperatively with the Department of Human Resources' Office of the Child Health Branch of the Division of Health Services and the North Carolina Pediatric Society to conduct a child passenger safety workshop in each of the four DHR regions. In actuality only three of the four workshops took place. The fourth workshop scheduled to take place in Fayetteville in April, 1980 was cancelled due to another conflicting meeting. The other three workshops were held in Winston-Salem, October 26, 1979, Greenville, December 5, 1979, and Asheville, May 30, 1980.

Public health nurses, county coordinators for the International Year of the Child, daycare center personnel, health educators, librarians and civic groups were in attendance at each of the workshops. Although attendance at each workshop was lower than anticipated, those who did attend were very interested and enthusiastic.

These regional workshops resulted in many requests for additional presentations or workshops at local health departments, hospitals and civic

organizations who were represented. These spinoff workshops have resulted in the establishment of most of the current on-going loaner programs.

Appendix G is the program agenda for the three hour regional workshops. Spinoff workshops were adjusted in terms of length of presentations and content according to time restraints and priorities of sponsoring groups.

Presentation at the Annual State Library Association Meeting

A meeting was held in the summer of 1979 involving representatives from the Department of Cultural Resources, the N.C. Chapter of the American Academy of Pediatrics, the Dept. of Human Resources, GHSP, the Dept. of Administration and HSRC to work towards a collaborative approach to effectively reach parents in the state. At that time the feasibility of libraries loaning out restraints similar to books was discussed. Mr. David McKay of the Division of Libraries indicated that the response of librarians to such a proposal would be mixed. To determine the extent of interest, Mr. McKay invited Dr. B. J. Campbell, Director, HSRC to make a presentation and raise the issue at the Annual State Library Association meeting held in Gastonia in September, 1979.

The outcome was positive in terms of libraries being a distribution point for materials on child passenger safety, but relatively few librarians were interested in actually loaning out seats. Subsequent contact with several libraries have resulted in the development of a portable display specifically designed for use in libraries and available from HSRC upon request. Just recently the Haywood County Library agreed to work cooperatively with the Homemakers Extension Service to establish a loan program.

Statewide Surveys

In order to further spread the word about child passenger safety, to identify volunteer groups, and to offer an opportunity to more service groups and health agencies to take advantage of the matching seat program, HSRC has

been working with the safety chairman of the State Jaycettes, the Head of the State Jr. Women's Clubs and officials of the Department of Human Resources to cooperatively work towards surveying the interests of the local service group chapters and county health departments. The following describes the current survey status of each group.

Jaycette Chapters

HSRC staff contacted Ms. Judith T. Ray, Safety Chairman of the North Carolina Jaycettes. Ms. Ray agreed to allow HSRC to send a survey to all Jaycette Chapter Presidents which would indicate their interest in child restraint loaner programs and their willingness to commit their chapter to a two year program effort in which they would receive safety seats on a one for one matching basis through the GHSP grant. Ms. Ray supplied the mailing list. The survey developed by HSRC along with a cover letter from Ms. Ray was mailed out on July 29. Ms. Ray followed the survey with an article in the Jaycette state newsletter.

The Center has only received 11 completed survey forms. Ms. Ray was contacted to notify her of the rather poor response considering that over 100 surveys were mailed to the local chapters in July. She indicated that she would try to encourage chapters to return the survey. Those chapters indicating interest in the program were sent additional material. Those chapters that have responded favorably are identified under "potential loaner programs" in the later status report of service and health care group involvement.

HSRC has been invited to conduct a child restraint seminar at the Mid-Year North Carolina Jaycette Convention to be held November 22 in Greensboro.

Junior Women's Clubs

In August Mrs. Michael Lewis, Director of the Federation of Women's Clubs was contacted with regard to possibly initiating a statewide loaner program effort through its Junior Women's Clubs. She was quite interested and asked that information be sent about the GHSP grant and loaner programs which she would take before the Executive Committee. The Executive Committee approved the survey, and the mailing list of all the State's Junior Women's Clubs was sent to HSRC. A survey has not been mailed as yet because we wanted to see what kind of response we received from the Jaycette survey. We did not want to get these clubs interested if they would have to be placed on a long waiting list for counsultation and training. The survey is now planned for the first part of November.

County Health Departments

Dr. Johnathan B. Kotch, Assistant Professor, Maternal and Child Health and member of the DHR staff was asked if he could possibly supply HSRC with a mailing list of county health departments and if he could get a high ranking official within the Department of Human Resources or the head of the Association of County Health Directors to send out a letter of support along with a survey to the county health departments. Dr. Kotch met with Dr. Ron Levine, Deputy Health Director, and indicated that DHR officials were enthusiastic about the involvement of county health departments and that DHR wanted to play a key role in the promotional effort. HSRC drafted a cover letter and survey which has been mailed to DHR for their review. Upon approval from DHR, the survey will be mailed to all the state's county health departments in late November.

Current Status of Loaner Programs

The following text provides a status report of health care professional and service group involvement in loaner programs. Four categories of involvement are identified.

1. Operational Loaner Programs - those groups who are currently operating a loaner program.
2. Groups in the Implementation Stage of a Loaner Program - those groups who have signed GHSP/HSRC contracts and are waiting for training, seats, etc.
3. Groups in the Planning Stage of a Loaner Program - those groups who have not signed GHSP/HSRC contracts but are definitely planning, meeting and working towards implementation and ultimately will sign the necessary contracts. Some have already had training by HSRC staff or have been scheduled for a workshop in the near future.
4. Groups who have shown interest in establishing a loaner program and have received materials - those groups who could potentially run loaner programs, who have written about or discussed their interest with HSRC staff and have reviewed materials. HSRC, for the most part, is waiting for responses from these groups at this time.

Operational Loaner Programs

Greensboro Jaycettes/Auto Safety for Kids Program

Contact: Linda F. Lewis, President, Greensboro Jaycettes
Robin Lane, A.S.K., Chairperson

Status: The Jaycettes currently have 50 infant car carriers loaned out to parents in their community (these seats were purchased by the Jaycees and Jaycettes prior to start of matching seat grant program). The Board of

Directors have voted to make application for the GHSP matching seat grant program. Currently, it is anticipated 50% of the net revenue produced by the loan program (this only refers to the 50 GHSP matching seats and not the revenue from the initial inventory) will be given to the A.S.K. Committee for use in continued public education. The Jaycettes are also starting a "try before you buy" program.

Greensboro Junior Women's Club/Auto Safety for Kids Program

Contact: Mrs. Linda Avery

Status: As it stands at the present time, this club is working cooperatively with the Greensboro Jaycettes and the ASK Program. The Jr. Women's Club have agreed to make presentations about child safety to interested groups and the community and refer parents to the Jaycettes' loaner program. The ASK Committee will provide support and help with the distribution of material.

Community Health Association

Contact: Maribelle Connerat or Judy Outlaw - Community Health Association
Robert MacLeod - Union County Health Department

Status: Contracts with GHSP have been signed, training provided and 500 matching seats have been delivered. The loaner program is currently being run out of the United Way office with future plans for rentals to be handled through the Charlotte Memorial Hospital and the Union County Health Department.

Rocky Mount Jaycettes

Contact: Ms. Kay Tyndall

Status: All required contracts were signed July 7, 1980 allowing the Jaycettes to participate in the matching seat program. They requested and received 25 GM Infant Love Seats from HSRC and are currently renting out seats with a total initial inventory of 50 seats.

Macon County Health Department

Contact: Ann Hyder

Status: GHSP contracts have been signed, training completed and a loaner program has been initiated with an initial inventory of 80 seats (45 matching). The Health Department nursing staff educates and refers the parents while the Macon County Homemakers Extension Services handles the demonstration and rental.

Wilson County Extension Homemakers Association

Contact: Mrs. Barbara L. Douglas

Status: HSRC made a general child passenger protection presentation for the Association. They are currently operating a very small loaner program (not under grant program) and have no interest in expanding.

Other Existing North Carolina Loaner Programs in Which HSRC is not Involved

Existing loaner programs that we have heard about are run by the following groups:

Garner Jaycettes

Raleigh Jaycettes

Cary Jaycettes

Sanford Jaycettes

We also believe there are existing programs in Wilkes County and Roanoke Rapids, but do not know who runs the programs, how many seats, etc.

Groups in the Implementation Stages of Loaner Programs

Gastonia Junior Women's Club

Contact: Ms. Karen Crayton

Status: The County Commission has signed the necessary contracts allowing this group to participate in the matching seat program. They have ten seats

either in-hand or pledged and are requesting ten matching seats from HSRC. A tentative training workshop has been scheduled for November 20 and the loaner program will be initiated as soon as possible after that date.

Groups in the Planning Stage of Setting Up Loaner Programs

Goldsboro Junior Women's Club

Contact: Robin Narron

Status: HSRC mailed bags, pamphlets, and bumper stickers to this 40 member club for distribution at their October 28 meeting. The PAS film will be shown and the club will decide whether to adopt an infant car carrier loaner program as their next project. If the vote is yes, Ms. Narron will call to arrange for a workshop.

Haywood County Homemakers Extension Service

Contact: Ms. Guilli Brendell

Status: The Extension service is in the planning stage for an infant car carrier loaner program. Nurses from Haywood County Hospital will refer parents to the County Library and the librarians will instruct parents and handle the paperwork. They plan to start with 50 seats (25 matching), but have indicated that they would not be ready for training for another 2-3 months. The County Commission is currently reviewing the GHSP contracts and checking into the liability question.

Alamance County Health Department

Contact: Fran Bryant and Dawn Smith

Status: This health department is in the initial planning stage of establishing a loaner program. Beverly Orr met with the health department staff and representatives of the Alamance County Hospital to discuss elements of the program. They had initially been working with the Jaycettes, but because of delays now plan to work with the Junior Women's Club.

Appalachian District Health Department

Contact: Carol Ingram

Status: HSRC sent material to Ms. Ingram in August, 1980. Upon reviewing information she indicated that the health department would definitely establish a loaner program. Ms. Ingram made a presentation which included showing the movie film, "Don't Risk Your Child's Life" to the health department staff to stimulate interest and HSRC is currently awaiting feedback.

Grace Hospital - Morganton

Contact: Dr. James Thomas

Status: A loaner program is planned with an operational date set for the latter part of November, although the GHSP contracts have not been signed at this date. The loaner program will be a cooperative effort involving the Pediatric Unit of Grace Hospital, Burke County Health Department and a local Jaycettes group. A training workshop has been set for November 5 by which time Dr. Thomas hopes to have the GHSP contracts approved and signed. One hundred matching seats are being requested from GHSP.

Potential Loaner Programs

Angier Jaycettes

Contact: Ms. Susan Holbrook

Status: Ms. Holbrook had written the Center for information regarding loaner programs. Ms. Orr called Ms. Holbrook, explained the GHSP grant program, mailed materials to her and is presently waiting for a response.

Cathy Greene

Status: Ms. Green contacted Bill Hall wanting information about loaner programs. She is a member of a sorority who is interested in this as a project. Materials were mailed to her and HSRC is waiting for a response.

Wilson Jaycettes

Contact: Ms. Kit Bunn

Status: Ms. Bunn wrote to the Center asking for information about infant loaner programs. Materials were mailed and HSRC is waiting for a response.

CP & L - Brunswick Southeast Plant

Contact: Mr. Bill Mack

Status: Sgt. Price of the TSI Unit, Highway Patrol, Fayetteville, had made a presentation at the Brunswick Plant which resulted in Mr. Mack sending a list of CP&L employees who were interested in receiving information about child restraints. Ms. Orr called Mr. Mack and volunteered to make a presentation to the employees on the subject of child restraints. Ms. Orr also explained the GHSP grant program, and Mr. Mack expressed interest. Materials were sent out to him. Upon receipt of the material Mr. Mack is to present the idea to the Plant Manager and get back in touch with the Center. Mr. Mack asked that HSRC begin sending information to the list of employees at CP & L until he could get back in touch.

Forsyth County Health Department

Contact: Ms. Lynn Knapp

Status: Information was sent. This agency is expected to participate, but no firm committment has yet been received.

Caldwell County Health Department

Contact: Mr. Charles Henry

Status: Mr. Henry called regarding loaner program information. He expressed interest in establishing one with the assistance of the Jr. Women's Club and indicated that he would contact the Center if they were interested in pursuing the idea any further.

Buncombe County Health Department

Contact: Sara Green

Status: HSRC has been corresponding with Ms. Green for several months. Loaner program information has been mailed to her along with film clips for use in a television news report. We are presently waiting for a response.

Catawba County Health Department

Contact: Janice Beaver

Status: HSRC conducted two three-hour training sessions for the health department and county hospital staff on October 1, 1980. The overall response was positive and they are immediately including child restraint information into their maternity and Child Health Clinics educational portion. The staff is still discussing establishing an infant car carrier loaner program.

Additional Jaycette Chapters who indicated interest in establishing a loaner program on their completed survey form

Asheboro Jaycettes

Statesville Jaycettes

Hendersonville Jaycettes

Knightdale Jaycettes

Child Passenger Safety Association Development

As indicated earlier, the first mechanism used to implement programs in local communities involved direct aid to the local community in the form of both matching seats and training and guidance. The second mechanism used involved providing aid in the organization and establishment of trial community-based Child Passenger Safety Associations (CPSA's) that would coordinate local activities and communicate problems and successes through a state CPSA. This concept of local CPSA's is being tried out in the state of Michigan through their Office Of Highway Safety Planning. The basic ideas of the Michigan

program has been to let the local organization run their own educational and distribution programs with the assistance of the state organizations.

Two different approaches are being taken to attempt to establish local CPSA's in North Carolina. The first method is to concentrate on establishing loaner programs in various communities and once the loaner programs have been established and operating efficiently, GHSP/HSRC will attempt to use them as levers to aid in developing local CPSA's with the loaner agencies being used as focal points.

The second approach to local CPSA development being employed is the direct organization of interested parties into an association that will in turn develop and administer local distribution and education programs. At present time, there are three local CPSA's that have been organized to varying degrees. Greensboro established the first program --- officially named "Auto Safety for Kids (ASK)." The organization of Greensboro ASK actually began in the fall of 1979 as a coalition of physicians, pediatric nurses, hospital personnel, and representatives of local civic clubs and has helped to establish a loaner program (operated by the Greensboro Jaycettes) and in-hospital and community education programs. HSRC has supplied educational and organizational materials and HSRC staff have served on the ASK advisory committee since its inception.

Charlotte has formed a coalition of health care agencies with the primary purpose of operating a large scale loaner program. The Charlotte Area Health Education Center, Pediatrics Department of Charlotte Memorial Hospital, Community Health Association (a United Way agency), and the Mecklenberg County Health Department are cooperating on educational activities and are running a loaner program through the Communities Health Association equipment rental division. Thus far, a more formally organized CPSA has not been formed but it is anticipated that they will do so and will involve other community groups in the near future.

The third local CPSA is the Edgecombe/Nash Child Passenger Safety Association and perhaps serves as the best example of the "ideal" CPSA as envisioned by project staff in terms of establishment, organization, and function.

The formation of the Edgecombe/Nash CPSA was initiated by an Edgecombe County Health Department health educator who attended the Greenville workshop previously discussed. This educator contacted HSRC to learn more about services available and the feasibility of starting up a loaner program in his area. After several phone conversations and much work on his part, an initial meeting of this group was set up in May, 1980. Invited to attend this meeting were health department personnel, hospital personnel, civic club representatives, Homemaker's Extension Service representatives, and Chamber of Commerce representatives from both Edgecombe and Nash Counties. This combination of the counties is due to the unique situation where the largest and most central city in the area, Rocky Mount, straddles the county line and many residents of both counties work, shop, and conduct business in Rocky Mount. This initial planning group held lunchtime meetings in Rocky Mount every other week for a total of three meetings. A representative from HSRC attended these organizational meetings and explained how we could assist them in achieving their goals, helped define realistic goals to strive for, delivered educational and promotional materials, and in general was present to answer questions and give advice. These meetings resulted in plans to institute educational programs in both local hospitals and each county health department, and the Rocky Mount Jaycettes agreed to run the infant carrier loaner program. As noted earlier, This loaner program was begun in July, 1980 with locally donated infant carriers and GHSP/HSRC matching seats and training by HSRC staff in how to operate the loaner program. Jaycettes in Nashville (Nash County) and Tarboro are currently in the planning stages of setting up more loaner programs for the area.

THE WARDS OF THE STATE PROGRAM

Overview and Planning Activities

As noted in the Introductory Section, one of the component parts of the overall distribution program involves work with county social service agencies responsible for foster children across the state. The overall goal of this component is to protect these children when they are transported in motor vehicles. The rationale for such protection is based primarily on the fact that this is a group of children who are the direct responsibility of the state and local government agencies and that the state should not only protect their own children but should also serve as a role model for other private and public agencies. A secondary goal is to also involve more local agencies as focal points for information distribution in the child safety area. As explained below, within each local county agency, the program involves a two-phase effort. In Phase I, the local Social Services staff themselves are first trained and provided necessary child restraints so they can safely transport children on a daily basis. The second phase of the program involves the training of foster parents, parents with whom foster children are placed, in order that these parents will have necessary restraints to safely transport each of the foster children in their care. It would also be hoped that in addition to protecting these foster children, these foster parents would also better protect their own children and would help distribute information in a convincing fashion to friends and other parents in their local community concerning the need for such protection. The following narrative outlines the steps taken to meet these goals.

The initial step in the foster care program involved a series of planning meetings with both state and selected local offices. The purpose of the

meetings and contact with the Department of Human Resources (DHR) and the local agencies was to evaluate their interest in the Wards of the State Program and promote their involvement in it.

The initiatives taken by HSRC involved two basic approaches. The first consisted of developing a dialogue with state-level officials to identify mutual goals and gain assistance in planning the program's operation. By engaging this support, information about our program could be communicated from the state to regional and local level workers. In addition, direct contacts with pilot county Departments of Social Services (DSS) were developed to generate enthusiasm for the program among participants, who then could transmit information about child safety to other counties. It was hoped that by working with both the state level administrators and with local personnel who would ultimately operate the programs, potential problems could be discovered and overcome in a shorter period of time.

From the outset, contacts within the DHR were very supportive of the program. A productive meeting was held in Raleigh with the Head of the Children's Services Branch (CSB) for the division of Social Services and the Head of Foster Care Services within CSB. These individuals provided technical assistance necessary for program planning and implementation.

Some of the information shared included an explanation of the structure of the Division of Social Services as well as data on the size and distribution of the target population around the state. Also, helpful advice concerning protocol including the notification of regional and county DSS directors was given.

In addition, HSRC learned of the existence of four regional training associates. At some point we hope to meet with them to discuss the possibility of their involvement in training participating agency staff.

On the local level, meetings were held with staff from the Orange County DSS. At these meetings, the program was described, child restraints were exhibited, safety information was distributed and agency transportation practices and needs were evaluated. In addition, other county DSS's were contacted by phone. The agencies reached included Alamance, Chatham, Cumberland, Robeson and Wake County DSS's. All of the above agencies initially expressed interest in participating, although Alamance DSS has since declined to do so. Interagency communication has helped acquaint other DSS with the project and thus has created wider interest and awareness.

To determine the level of interest among DSS's statewide, a survey was prepared to send to each county DSS (See Appendix H). Prior to the mailing of the survey, in keeping with protocol, two preliminary letters were distributed by the State Division of Social Services. The first was sent to the four Regional Directors, to inform them of the program and our intentions, and to request their support. The second letter was sent to each DSS Director, and was similar in content to the first one.

Following this, HSRC sent the survey along with a program description to the agencies. The survey questions were designed to determine the number of interested agencies, as well as potential need for child restraints in terms of the number required per agency.

Thus far, forty counties in addition to the counties originally contacted have responded to the survey. Thirty-five agencies have expressed a desire to particpate, four have declined and one has said that they are interested but have no children in the target age group.

A follow-up letter was sent to those agencies expressing interest. This described the role of HSRC in the program, including the securing of funding, the drawing up of agreements, acquisition and storage of seats and training of

workers. Also, sample copies of the contract and resolution were enclosed for their perusal.

Training of Local Agencies - The training for agencies in the program consists of three steps. First, an HSRC staff member conducts a session with the staff involved in transporting children. This session includes general content on child auto safety and the role of child restraints, information on the kinds of restraints available and the use of the restraints themselves. Restraint usage teaching includes a demonstration of the workings of the restraints, proper placement of a child into the restraint, and, whenever possible, a demonstration of proper installation of the child restraint in the automobile.

Once the staff have been trained at the initial session, they may then instruct other agency staff who could not be present, using materials that HSRC has developed. A set of slides and films of crash sequences from the Insurance Institute for Highway Safety used at the initial sessions are available. Also, a "canned" speech which accompanies the slides and crash sequence narration topics have been prepared. These materials are available to the DSS, as needed.

As noted above, the second phase of the program in a given county is the involvement of the foster parents themselves. HSRC members have been present during the training of parents to monitor problems and to provide any advice and assistance which may be needed. However, the majority of parent training is expected to be done by the agency staff. Once again, materials appropriate for this purpose have been prepared by HSRC staff.

The above training has been done largely at the county DSS's. On one occasion staff training was done at HSRC. When training is done at the

DSS's, demonstration of CR installation in the cars used by agency staff is often possible.

Programs Operating

The foster care projects are implemented in two phases, the first phase involving the provision of CR's for agency staff to use in transporting foster children, and the second being the provision of CR's for distribution to foster parents caring for children aged four and under. By October 1, 1980 it is expected that Phase I will be operational in Chatham, Lenoir, Macon, Orange, Moore, Cumberland and Wake Counties. Phase 2 will be in effect in Chatham, Orange and hopefully Wake County. (See Figure 2.)

Problems Encountered

Thus far in the implementation of the foster care program two basic problems have been encountered. As noted earlier, less than 50 percent of the counties surveyed have responded to the questionnaire concerning their potential involvement in the program. Obviously it will be the goal of the program to get all 100 counties involved at some point in the future. It is HSRC's feeling that the response, although good, fell short of the ultimate goal due to the fact that the agencies surveyed had received little prior information concerning the overall problem of child safety. Very few groups, even those involved in protecting the safety of children, are aware of the fact that highway crashes are the number one threat to the health of children. Thus, it may have been difficult for agencies receiving the survey to decide whether or not to participate in the program. To overcome this problem, in the future HSRC will continue to attempt to speak on a one-to-one or a workshop basis to larger

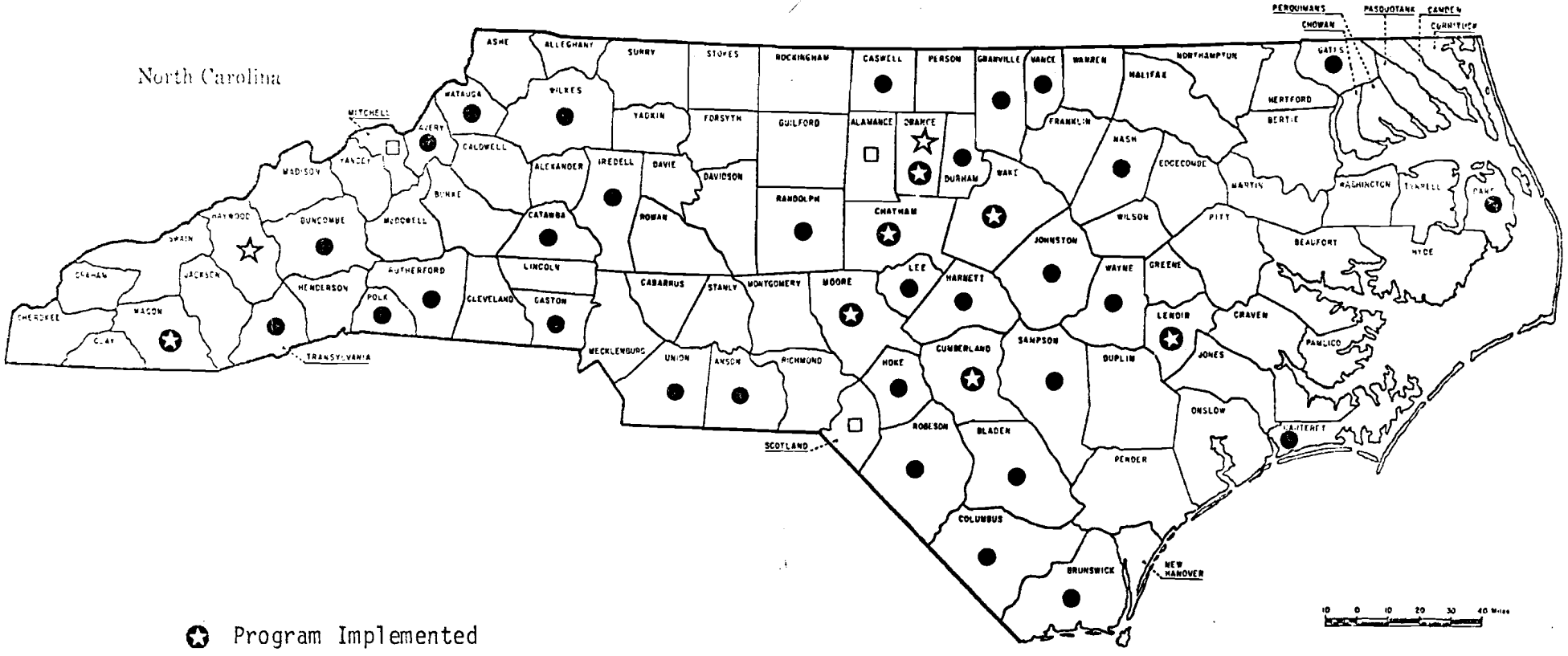

Figure 2. Implementation Status - Foster Care Program

numbers of the social service personnel, particularly to the trainers of this group and to the people organizing the annual conferences. An attempt was made this year to become part of the conference program and, indeed, HSRC will have a display booth at the annual conference to be held in October. However because of the fact that the program was set for this year (and perhaps because of the fact that the coordinator is not yet convinced of the magnitude of the highway safety problem) HSRC staff will not be leading one of the workshops. In the coming year, serious attempts will be made to insure that HSRC staff play a much more major role in this and other yearly conferences. In addition HSRC will distribute brochures and other safety related introductory materials to the counties who have not yet responded to this survey.

The second major problem encountered is one that had been encountered nationwide in the child safety area and is related to concerns expressed by various county attorneys concerning the potential liability of the foster care agency who agrees to provide training and seats to foster care parents. Because of the nature of their job, these attorneys are charged with the responsibility of keeping potential county liability as low as possible. Thus it will always be the case that, to them, the "safest" solution would be to not carry out the program. For this reason it will always be left up to an advocate within the county or outside of the county structures to convince the county social service administrator that the program is indeed important enough to implement and that the liability issue may well rise from non-use of safety seats. In an attempt to resolve these problems, HSRC staff has worked directly with the lawyers to explain the purpose of the program, the agreements that have been prepared, and the fact that all steps known to minimize liability have been taken. However, it

has been found that this was often not sufficient and that some counties are not participating on the advice of their lawyer. HSRC is attempting to solve this problem by having the county attorneys speak directly with the State Attorney General's representative who works with the Governor's Highway Safety Program. In addition we will continue to provide as much detailed one-to-one information as is necessary to help overcome these concerns.

IMPLEMENTATION OF SPECIAL RESTRAINT DISTRIBUTION PROGRAMS

In addition to the two major distribution areas--the local loaner programs and the wards-of-the-state program--HSRC has also initiated some additional trial programs aimed at other special groups. Thus far these have primarily been oriented to transporting handicapped children. They are being considered "trial" programs in that they were not originally planned as a specific task but instead, a need has been identified while carrying out other tasks. Decisions concerning whether to expand these efforts will be based on the trial program experience.

In the first of these pilot efforts, HSRC was contacted by Ms. Jan Shepard, Director the Northside Children's Learning Center, a branch of the Orange-Person-Chatham County Mental Health Center, concerning how to more safely transport their handicapped children to and from the center each day. HSRC worked with the Center in developing a contract and outfitted the Center's van with 11 convertible-type restraints. HSRC staff also installed two safety belts and a harness for a seat specifically designed for a handicapped child and trained those who would be involved directly or indirectly with the transportation of these special children. Preliminary status reports indicate the program to be very successful. The restraints are not only providing a high degree of safety, but are also providing upper torso support for some of their children who need such support.

HSRC is also working with Developmental Evaluation Centers in order to provide the DEC employees with CR's to use when transporting other handicapped children. At present, contracts have been completed between the GHSP and the DEC of Western Carolina university for this purpose. One each of the infant

carriers and the convertible safety seats has been provided for each office of the Western DEC. These offices are in Waynesville, Cullowhee and Murphy, with a total of 6 CR's supplied for the Western DEC. In addition, the Asheville DEC will receive two CR's for their offices. Contracts are still being completed and the training will be done in the near future.

In the same stage of implementation is a program for the Lenox Baker Children's Hospital of Durham. This is a state-supported institution providing in and out-patient care and schooling for chronically ill and handicapped children.

Dialogue with staff in the Developmental Disabilities (DD) branch of the State Department of Human Resources (Division of Health Services) has been ongoing. As a result of these discussions, the DD staff is informing other agencies under its supervision of HSRC's activities, so that these agencies may also become involved.

In a final special program not specific to handicapped children, HSRC met with Lois Queen of the Southwestern Child Development Commission to discuss the possbility of the Commission using child restraints while transporting children under 4 years of age to and from their 22 day care centers. At that time HSRC was considering the Commission for another "pilot use" program. When we found out it was not a county or state agency, but a non-profit corporation, we felt we could not offer them the seats under the GHSP program. However, since that time, GHSP felt there was no problem in giving seats to the Commission as long as they went through a County agency. HSRC plans to contact Ms. Queen in the near future to proceed with the program.

ANALYSIS OF ACCIDENT AND MEDICAL EXAMINER DATA

As with any type of project, there are several goals that can be set and various methods of achieving these goals. Thus far in the report, the success of this project has been measured in terms of numbers of people contacted, the amount of educational materials distributed throughout the state, and the number of distribution programs implemented or planned. While these are suitable proxy measures of effectiveness, the ultimate goal of a program such as this must be to increase the rate of restraints used by children in crashes which should, in turn, result in a decrease in the number of children being killed or seriously injured in car crashes. The primary goal of this project, as stated in the initial Child Restraint Usage contract 306-78-001-001, was to effect "an increase in the number and percentage of restrained children in accidents and a subsequent reduction in fatalities and serious injuries. Realistic project goals would be an overall increase in usage rates of 100-200% (from 5% to 10-15%) and a subsequent reduction in fatalities of 10-20% (3-5 per year)."

An analysis of data contained in the North Carolina Accident Files and in the North Carolina Medical Examiner Files reveals that this project has met with limited success when measured by these criteria.

Table 4 lists the percentages of 0-5 year old restrained occupants in reported North Carolina crashes.

Table 4. Restraint usage for 0-5 year old occupants in North Carolina crashes.

Year	% Restrained*
1974	5.4%
1975	5.0%
1976	4.6%
1977	5.9%
1978	4.7%
1979	7.0%

*Either by a child restraint device or seat belts.

By looking at these figures, one can see that there has been a forty percent increase in restraint usage rates between 1975 and 1979. A forty percent increase at first sounds good until one realize that this translates into an increase in only two percentage points to the 1979 level of seven percent. In other words, it is still the case that as late as 1979, 93% of the young children involved in crashes have not been protected against injury by the adults in the car, usually their parents. This disappointing increase may be indicative of several factors. One is that the methods being employed to educate parents are not as effective, or as widespread, as hoped and other avenues need to be explored. Second, it may be the case that no type of educational program will be effective and that some type of legislative activity will be necessary to cause parents to buckle-up their children.

When the Medical Examiner data is examined, the situation appears to be better. Table 5 shows the number of 0-5 year old occupants killed in North Carolina crashes.

Table 5. Number of occupant deaths for 0-5 year old children involved in North Carolina crashes.

Year	# Killed
1974	28
1975	29
1976	26
1977	28
1978	36
1979	24

The limited amount of data does not allow us to draw many conclusions. The figures for 1979 do show that restraint usage was highest for this year and the number of deaths was lowest. At the same time, 1976 had lowest restraint usage rate but also had fewer deaths than 1977 or 1978, indicating the variability

in these small number of fatalities. One bit of information does tend to stand out when reviewing the Medical Examiner's data. Of the 171 children killed during these six years, there was only one child killed who was restrained at all. In 1978, there was a five year old girl who was in an adult seat belt who received fatal injuries. None of these deaths involved children in safety seats. Conversely, there were 170 unrestrained fatalities.

Table 6 more closely examines the 1979 accidents to identify relationships between restraint use, injury, and age. Past studies of observed restraint usage rates tend to show definite and large differences between restraint usage for infants (age 0-1) and usage for toddlers (2 years and older). This large difference shows up in this accident data as well. Of those children aged one or less, 15.5 percent were restrained by adult belts or CRD's while only 4.7 percent of the 2-5 year olds were restrained in any manner.

A close examination of this data reveals that those children who were using some type of restraint were much less likely to be killed or seriously injured in crashes. Of the 24 children, 5 infants and 19 toddlers, who were killed, none were restrained. When fatalities and incapicitating injuries are combined (K+A), it can be seen that 1.8 percent of the unrestrained infants and 1.9 percent of the unrestrained toddlers were killed or seriously injured while 0.7 percent of the restrained infants and 1.0 percent of the restrained toddlers were seriously injured. These figures very roughly indicate that the use of seat belts or CRD's resulted in a 61 percent reduction in death or serious injury for infants and a 47 percent reduction for toddlers. Conversely, there was a 7 percent and 5.5 percent increase in the proportions of restrained infants and toddlers who received no injuries at all. The use of restraints also appears to result in approximately a 25 percent reduction in moderate and minor injuries.

Table 6. Restraint usage by injury by age. 1979 N.C. accident files.

	Infants (Age 0-1)				Toddlers (Age 2-5)				Restraint Use (Age 0-5)
	K-A	B-C	None	Total	K-A	B-C	None	Total	
No Restraint	44 (1.8%) [5 fatalities]	396 (16.3%)	1989 (81.9%)	2429	199 (1.9%) [19 fatalities]	1662 (16.1%)	8492 (82.0%)	10,353	12,782 (92.2%)
Restrained (Belts and CRD's)	3* (0.7%)	51 (11.3%)	396 (88.0%)	450	5* (1.0%)	63 (12.2%)	447 (86.8%)	515	965 (7.0%)
Adult Belts	1 (0.6%)	11 (7.0%)	146 (92.4%)	158	3 (0.8%)	44 (11.1%)	348 (88.1%)	395	553 (4.0%)
CRD	2 (0.7%)	40 (13.7%)	250 (85.6%)	292	2 (1.7%)	19 (15.8%)	99 (82.5%)	120	412 (3.0%)
Missing	0 (0.0%)	4 (16.7%)	20 (83.3%)	24	4 (4.1%)	26 (26.8%)	67 (69.1%)	97	121 (0.9%)
Total	47 (1.6%)	451 (15.5%)	2405 (82.9%)	2903	208 (1.9%)	1751 (16.0%)	9006 (82.1%)	10,965	13,868

*There were no fatalities for restrained children in either age group.

Also of interest and concern are differences in injury rates between the types of restraints used. For both age groups, the proportions of children injured while wearing adult seat belts are smaller than for those children in CRD's. This somewhat unexpected finding could be the result of several factors. First, the low frequencies observed in the restraint used categories lead to some inherent instability in the effectiveness estimates. In addition, there are many different types of CRD's on the market and some older models are being handed down from child to child. Some CRD's are crash-tested and some are not. Some flimsy infant feeder seats may be mistaken as infant safety seats by investigating officers. It is impossible to determine from the data what type and of what quality the CRD in use was. Another factor to consider is that even a crash-tested CRD must be properly installed in the car and the child must be properly secured within the device in order for it to provide proper protection. HSRC observations, as well as other observational studies, have shown that only about 60 percent of the CRD's in use have been properly installed and about 50 percent of the children are properly secured within the device. If it is assumed that the same proportions of misuse are present in crash situations as in observational data, then it is rather easy to understand why the seat belted children would be comparable to those in CRD's. This does provide some comforting thoughts though. One is that it appears that a misused CRD is able to provide a good deal of protection to children in crashes, certainly much more than allowing a child to ride unrestrained. Secondly, this data does suggest that adult seat belts are an acceptable substitute for CRD's and that they should be used when a CRD is not available, even for small children.

SUMMARY AND RECOMMENDATIONS

North Carolina's child's passenger safety program, as funded by the Governor's Highway Safety Program and coordinated by the Highway Safety Research Center, appears to have appreciably met the stated goals. Recommendations made in the previous yearly project report plus efforts required in the current contract call for (1) improvements in the overall coordination of the total program, (2) expansion of efforts in the areas of education, distribution, and legislation including the implementation of pilot efforts in a number of areas, (3) inputs into the program from out of state child safety efforts, (4) improved coordination of communication between involved state agencies, and (5) the design of an overall program which is flexible enough to meet the needs of North Carolina localities. As detailed in the preceding pages, these goals appear to have been met. A summary of this year's accomplishments is as follows:

In the area of program coordination, a more formalized plan has been implemented which is allowing GHSP and HSRC to successfully interact with all the other state and local agencies who are becoming involved in the child safety area. The first two years of the educational activities resulted in a tremendous increase in the number of N.C. health care professionals and safety advocates who were both informed about child auto safety and who were beginning to educate others. The first six months of this current project year provided time for some basic planning of the loaner and other distribution programs. However, the greatest growth in local community contact and program implementation may well be occurring at the present time. Because of this tremendous growth rate, it is increasingly important that coordination of all activities be continued. We feel that this goal is being met only because all programs are being run through one central agency, the Governor's Highway Safety Program, and because one agency, the Highway Safety Research Center, is primarily responsible for coordinating the implementation of these programs.

In the educational area during the past year over 60,000 brochures and related materials were distributed to more than 200 doctors' offices, hospitals, health education classes, police department personnel and to other local agencies. In addition, in an attempt to increase the size of the pediatrically based program, a personal letter was written and distributed to every pediatrician in the state of North Carolina. HSRC staff were involved in more than 35 different presentations and workshops, appeared on two TV shows, took part in five to ten radio interviews with radio stations across the state and helped develop two radio spots which were distributed statewide.

The distribution program for which planning was completed and implementation has begun is basically a three pronged program comprised of local loaner programs, programs for foster children, and pilot efforts in other distribution areas. In the loaner program area, training materials have been developed for use by local agencies. This included two "how to" manuals -- one designed for civic groups and one for hospital-based loaner operations. In the planning area, questionnaires were designed for both civic groups and county health departments to ascertain and promote their interest in starting loaner programs. These questionnaries were mailed to over 100 Jaycette Chapters across the state and will be mailed to the Junior Women's Club Chapters and local Health Departments during the first quarter of the coming project year. The local Health Department mailing is a major step toward expanding the program into the rural areas of the state where pediatricians are scarce. Actual loaner programs have been begun or expanded in five locations at which over 600 infant carriers have been distributed. Programs for six other groups are in the advanced planning stages, needing only training and/or equipment to begin.

In the Wards-of-the-State effort, the aim is to protect the group of children for whom the state and counties are directly responsible. Some of the

planning activities for this program included a study of its' feasibility in cooperation with appropriate Department of Human Resources personnel and local program participants. A survey was sent to all 100 County Social Service agencies and 35 positive responses were initially received. Thus far, training has been provided and the program has been implemented in seven counties.

In the area of innovative pilot programs, HSRC's staff has worked with a small group of Developmental Evaluation Centers and other centers educating handicapped children to determine the feasibility of such programs. Again an attempt is being made to maximize use of the restraints purchased by the state. These pilot programs have involved the actual distribution and installation of seats as well as appropriate training for the agencies' staff who transport the children.

Based on these efforts and upon unmet needs which we hope to address, the following recommendations relating to future North Carolina endeavors in the area of child passenger safety are proposed:

Recommendation No. 1. North Carolina should continue to expand efforts in the areas of education, safety restraint distribution, and potential legislation/regulation.

As stated in the preceding pages, it appears that the current program has been successful in meeting some of the goals established. However, in carrying out the project tasks, a great deal of additional interest has been generated among local community groups. This interest is in turn, generating additional needs. Therefore, it is recommended that activities in all three areas continue to be carried out by the Governor's Highway Safety Program. Because of the fact that distribution programs directly involve local agencies through the requirements for matching seats, use of local manpower, and the fact that the local governmental bodies themselves must be aware of and involved in the effort, it is

recommended that emphasis on these distribution programs be strengthened. This recommendation that will hopefully be met through the 1981 fiscal year project.

Recommendation No. 2. Continue close coordination of all child safety program areas to insure the most efficient use of the resources. As stated above, because HSRC sees the State entering a period of great growth in the child safety area and because education, distribution and legislative activities are closely interrelated, it will become increasingly important that close coordination of these program areas be continued. We feel that this recommendation can only be met through GHSP's funding and overall project management and with HSRC serving as the single coordinating point.

Recommendation No. 3. Project staff should renew efforts to improve access to State level contacts in health agencies, professional societies and associations, consumer and civic groups, and pertinent Ad Hoc Committees. In addition to direct contact between project staff and health care professionals, experience with pediatricians across N.C. has indicated the need to have support and endorsement for the child restraint message coming from the statewide leadership organizations. While such a liason with the N.C. Pediatrics Society has been most fruitful, there are many other groups whose endorsement, support, and participation are needed. GHSP/HSRC/DHR staff should identify these groups and the key persons within, and attempt to enlist their aid in education, distribution and legislative efforts.

Recommendation No. 4. To expand the child restraint education program, it is recommended that the assistance of trainers in other state highway safety and public health agencies be enlisted. The personnel of many state agencies includes staff who provide training, education or public service presentations to a variety of groups. Examples of such individuals include the Governor's Highway Safety Program field staff, the State Highway Patrol Traffic Safety

Information Section, Driver Education Representatives for the Division of Motor Vehicles and appropriate staff development personnel in the Department of Human Resources. GHSP/HSRC Project staff should contact these individuals, enlist their support and aid, and provide them with necessary information and materials.

Recommendation No. 5. Discussion of potential North Carolina legislation should be incorporated into presentations and local contacts. Observational and accident data to date indicate that there is still a high degree of morbidity and mortality among children in crashes, though a well-designed education program has been implemented. Thus it may become increasingly evident that the best way to effect large changes in the child restraint usage patterns of adults transporting children is through legislation. Initial steps in the legislative process have already been made, although the legislation has not yet been passed. This is due largely to the lack of a local constituency lobbying for the legislation. Also preventing its passage is the fact that few local loaner programs are available to help overcome the concerns about the high cost of restraints. To promote the development of a local constituency, and to obtain inputs from citizens concerning such legislation, it is necessary that all staff persons involved in implementation of education and distribution programs be able to discuss the potential need for a law as well as the results a law might bring about. This goal of discussion is often met through questions posed by the audiences.

Recommendation No. 6. Continue to monitor the state-of-the-art of child passenger safety and to incorporate findings and experience gained from other programs and researchers into the North Carolina program. As in the past, state-of-the-art changes are happening in both the area of equipment design and in the area of education and distribution program techniques. These will

necessitate continuous updating of materials used and continual changes in project direction. For example, on January 1, 1981, new Federal equipment standards will become law. These will probably cause newly designed seats to enter the marketplace. It will be necessary for HSRC and GHSP staff to keep abreast of these changes so that N.C. consumers might be made fully aware of their impact.

Recommendation No. 7. Continue to plan into the North Carolina program a degree of flexibility which will allow for the implementation of innovative programs, while accommodating changes in existing program components and directions to meet unexpected needs. To date, the North Carolina program has been flexible enough to allow the state to meet child passenger safety needs as they've arisen. A recent example discussed earlier involves the transportation of handicapped children. By remaining flexible, GHSP and HSRC staff will be able to help communities design programs appropriate for their localities and particular situations. This will also insure that local input can be accommodated.

Recommendation No. 8. Continue to request and use local inputs in the North Carolina Child Passenger Safety Program. Throughout the history of this project, an attempt has been made to meet local needs and to guarantee that local inputs are incorporated into project-related decisions. As explained earlier, much of this local input comes from face to face meetings between project staff and the people at the community level. It is very important that this mechanism of requesting and receiving local input be continued and expanded where possible, so that programs can provide the maximum benefit for a community.

In summary, the North Carolina Child Passenger Safety program has begun to address some very important needs in the area of occupant safety for young

children. Through the continued expansion of a well-coordinated and well-planned program, it is hoped that North Carolina will continue to better protect its children as they ride in motor vehicles.

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APPENDIX A

Wall Posters

your best "baby sitter"

North Carolina motor vehicle accidents kill more children than any disease.

Child restraints could save 70 of every 100 children who die in crashes.

It's your child's life. But it's your decision.

Ask your doctor for information.

Distributed in the interest of highway safety by:
the University of North Carolina Highway Safety Research Center and the Governor's Highway Safety Program.

a great "kidnapper"

CHILD RESTRAINTS - Solution for Two Problems

-makes you a safer driver by reducing distractions

-makes your children safer riders by protecting them in crashes and sudden stops

When your car stops — your child doesn't. What he hits is your decision.

Ask your doctor for information.

Distributed in the interest of highway safety by:
the University of North Carolina Highway Safety Research Center and the Governor's Highway Safety Program.

don't "clown around" with safety

It's not funny when your child doesn't ride in a restraint or rides in a poorly designed one.

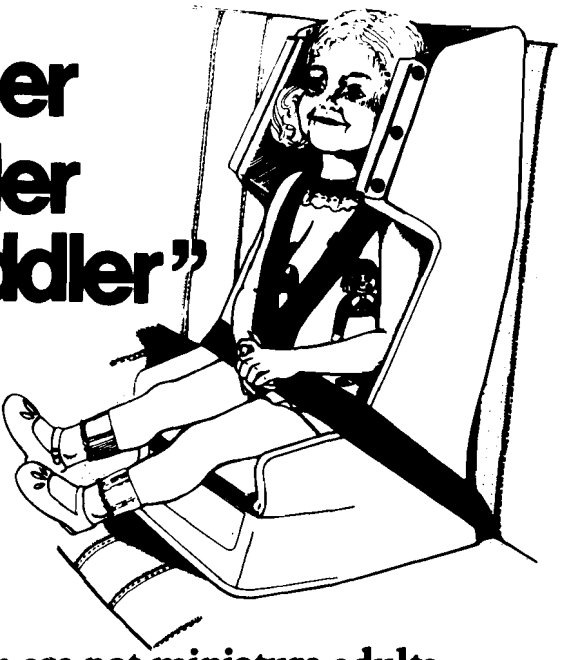
Well-designed child restraints tell you they have been crash-tested. They cost more because they are worth more.

When your car stops — your child doesn't. What he hits is your decision.

Ask your doctor for information.

Distributed in the interest of highway safety by:
the University of North Carolina Highway Safety Research Center and the Governor's Highway Safety Program.

a super "toddler coddler"



Children are not miniature adults.

-Their bodies are different. They need their own special restraint systems.

-Their minds are different. They can not make their own safety choices.

It's your child's life. But it's your decision.

Ask your doctor for information.

Distributed in the interest of highway safety by:
the University of North Carolina Highway Safety Research Center and the Governor's Highway Safety Program.

APPENDIX B

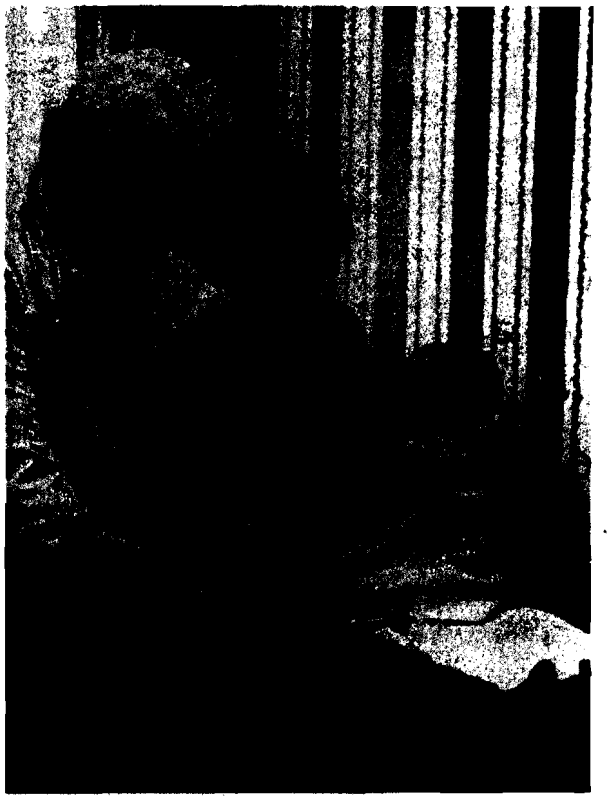
Child Restraint Brochure
(Updated July, 1980)

POINTS TO REMEMBER

- Be sure that the restraint you buy has been **crash-tested.** *(Crash-tested restraints list that information on the box or in the descriptive literature.)*
- Be sure to buy a restraint that will fit your car seats and belts. *(Buy from a store that will allow you to return it if it doesn't fit.)*
- Infant carriers **must always face the rear of the car.**
- All infant carriers and child safety seats **must be secured to the car by the adult seat belts and your child must be secured by the harness or shield provided.**
- If your restraint includes a tether strap, **it must be used** or the restraint loses much of its effectiveness. Some crash-tested devices do not require a tether.
- Remember, your child may like his restraint better if it allows him to see out the windows.
- The protection provided by all restraints (including seat belts) can be increased by installing them **in the rear seat.**

Prepared by
the University of North Carolina
Highway Safety Research Center
and the North Carolina
Governor's Highway Safety Program

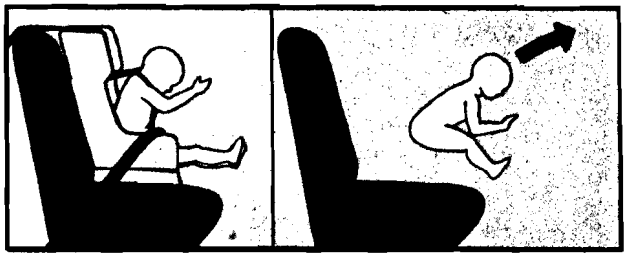
It's your child's life...



But it's your decision.

Like most parents, you recognize everyday threats to your baby's life. You protect your child from sharp objects and poisons around the home and immunize him against childhood diseases. However, do you realize that more North Carolina children are killed in motor vehicle accidents than by any other single cause? In fact, your children are much more likely to die from auto accidents than from childhood diseases, such as rubella, diphtheria, polio, measles, tetanus, and whooping cough. **Yet 95 out of every 100 young North Carolina children who are in car crashes have not been buckled up by their parents.**

In a crash or sudden stop, only the car stops suddenly. The occupants within the car continue moving until something stops them. Restrained occupants are safely stopped by belts, but unrestrained occupants are thrown against the windshield or dashboard, or even out of the car.



The most effective way to safely secure a child in a car is to have him ride in a crash-tested infant carrier or safety seat. The seat belts that come in cars should be used rather than no protection at all, but children's bodies are not yet developed enough to be completely protected by adult belt systems. Children need their own restraint systems—ones that are designed just for them. **And since they aren't old enough to make their own safety decisions, the only people who can decide to protect them are parents and other adults.**

At least 80 out of every 100 children who die in automobile crashes could survive if their parents would make the effort to secure them in crash-tested safety seats.

Children are not miniature adults.

Their minds are different.
They cannot make their own safety decisions.

Their bodies are different.
They need their own special restraint systems.

When your car stops - your child doesn't.

What he hits is your decision.

Child safety seats are designed to protect children in crashes. Unfortunately, most drivers think that accidents will never happen to them so they don't use restraints for themselves or their children. **However, safety seats have other benefits that are important on each and every trip.** Sudden emergency stops happen much more often than crashes and restraints protect children in these situations. It is also important to note that restraints can actually **prevent** accidents. Scientific studies show that children behave much better if they ride restrained than if they are allowed to roam free in the car. Children falling off seats, hanging out windows, or jumping up and down actually cause hundreds of accidents each year in North Carolina by distracting the driver's attention away from the safe operation of the car. These accidents could have been prevented if only the children had been restrained—even by a seat belt.

When traveling by car a safety seat is

"your best baby sitter"

A child who has never ridden in a safety seat may at first object to riding restrained. This is only natural because it is something that he is not used to. But, if you can disregard the child's protests and praise good behavior, he can learn to accept riding in the restraint. Just like immunizing your child against diseases, protecting your child in the family car is a decision you must make for him. It might cause some tears, but in the long run it will be worth it to both of you.

	Name and Manufacturer	Height/Weight Range	Type	Price	Comments
Infant Carriers	Dyn-O-Mite (Infanseat)	To 20 lb.	1	$17-24	
	Ford Infant Carrier (Ford)	To 20 lb.	1	$16-22	Ford, General Motors, and Chrysler infant carriers are identical. Available at car dealers.
	Infant Love Seat (GM)	To 20 lb.	1	$16-22	
	Mopar Infant Safety Carrier (Chrysler Corp.)	To 20 lb.	1	$16-22	
	Trav-L-ette (Century)	To 17 lb.	1	$17-24	
Infant Carriers which convert to Child Seats	Bobby-Mac 2 in 1 Car Seat Bobby-Mac Deluxe Car Seat (Collier-Keyworth Co.)	To 40 lb. To 40 in.	1,2,3	$25-35	Rear facing infant carrier, seat with shield and harness, no tether.
	Bobby-Mac Super Car Seat (Collier-Keyworth Co.)	To 40 lb. To 40 in.	1,3	$40	Rear facing infant carrier, seat with harness, top tether required.
	Care Seat #987, #988 (Kantwet Questor)	To 43 lb. To 43 in.	1,3	$38-43	Top tether optional but recommended for maximum safety
	Safe and Easy #13-203 (Cosco)	To 40 lb. To 40 in.	1,3	$35-45	#13203 requires top tether. #13313 does not require top tether. Carefully note model numbers when making selection.
	Safe and Easy #13-313 (Cosco)	To 40 lb. To 40 in.	1,3	$40	
	Safe-T-Seat #78 (Peterson Baby Prod.)	To 43 lb.	1,3	$40	Seat with harness. Top tether strap required.
	Safety Shell #74, #75 (Peterson Baby Prod.)	To 40 lb.	1,2,3	$28-43	Seat with shield or harness. Top tether required with optional booster base.
	Teddy Tot Astroseat VI (International Mfg.)	To 43 lb. To 43 in.	1,3	$40	No top tether required.
	Trav-L-Guard (Century)	To 43 lb. To 42 in.	1,3	$30-42	No top tether required.
Child Seats	Child Love Seat (General Motors)	20-40 lb. To 40 in.	3	$33-44	Top tether strap required.
	Fitz-All Delux #597 (Kantwet/Questor)	18-43 lb. To 43 in.	3	$25-30	Top tether strap required.
	Mopar Child Seat (Chrysler Corp.)	21-50 lb. To 45 in.	2	$29	No top tether required.
	Strolee Car Seat #595 (Strolee of California)	18-43 lb. To 42 in.	3	$30	No top tether required.
	Sweetheart Seat #70(R), #71(R) (Bunny Bear)	20-40 lb.	3	$35	Models are convertible but recommended only in the toddler position.
	Teddy Tot Astroseat V (International Mfg.)	To 40 lb. 15-42 in.	3	$30	Top tether strap required.
	Tot-Guard (Ford Motor Co.)	20-50 lb. 18-28 in. (seated)	2	$30	No top tether required.
	Wee Care Car Seat #5975 (Strolee of California)	20-43 lb. To 42 in.	3	$32-45	Convertible model but recommended only in the toddler position.Top tether strap required.

TYPE
1 Infant Carrier
2 Child Seat with Shield
3 Child Seat with Harness

$15 to $50 - How Much to Pay?

Well-designed child seats and infant carriers cost between $15 and $50. There are less expensive ones available, but unless they are crash-tested, they aren't worth the cost.

Fifty dollars will not even insure your car—which you can replace—for one year. But for less than $50 you can insure your child—who cannot be replaced—against death in a car crash for up to four years.

Also, there are some ways you can save money. In some cities, civic groups are conducting safety seat recycling programs that rent out infant carriers for a small fee. Check whether your area has this service by calling your local civic groups or childbirth information service.

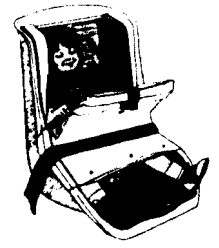
Types of Safety Seats

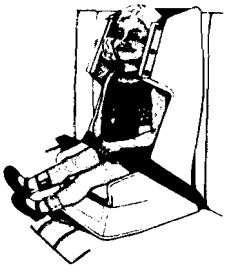
Infant Carrier

Infants (less than about 20 pounds) require a carrier which is a tub-shaped bed that cradles the child in a semi-erect position. Infant carriers are designed to face the rear of the car and must be secured to the seat by the adult belts already in the car. For very small infants, it may be more comfortable to roll up small blankets or towels and place them inside the carrier at the sides of the infant's body. Some models of infant carriers convert to child seats (described below) so that they can be used from the child's birth until he weighs about 45 pounds.

Child Seats

For children who weigh more than 20 pounds and can sit up by themselves, there are two types of child seats. The shield type consists of a seat with an impact shield (a padded and slightly flexible surface) that comes up close to the child's stomach and then bends away from his face and chest. The harness type secures the child to the safety seat with a five-part belt system. Both the shield and harness seats must be secured to the car seat by the adult seat belts already in the car. Some child seats also include a top tether strap that must be secured to a rear seat belt or the window shelf behind the rear seat. A variation of the harness type uses the five-part harness without the protective seat. It should be installed in the center rear seat and is anchored to the rear seat belt and window shelf behind the rear seat.

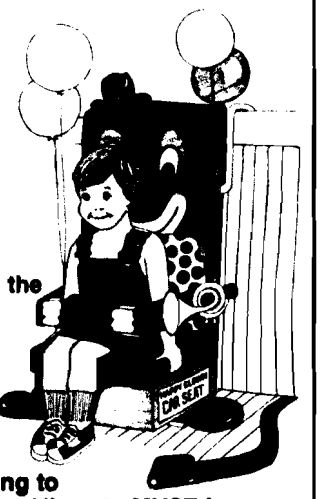




Seat Belts

Adult seat belts should be used for children who have outgrown their safety seats or for children who can sit up by themselves when no safety seat is available. The lap belt should be fitted snugly across the child's hips—not across the stomach— and an attached shoulder strap should be placed behind the child unless you are certain that it will not contact the child's face or neck.

Don't Clown Around with Safety



Unless a safety seat says it has been crash-tested (dynamically-tested means the same thing), it can't really protect your child.

Even a crash-tested model will not protect your child unless it is installed and used according to manufacturer's instructions. All seats MUST be secured to the car by adult belts. In addition, infant carriers MUST face rearward and top tether straps MUST be used on some models.

The existing Federal Standard for child safety seats does not require crash-testing and does not assure adequate protection in the event of a crash. (A revision to this Standard, effective mid-1980 will require such crash-testing.) All of the devices listed in this brochure have been crash-tested by various safety research organizations and provide a high level of protection. In addition, new safety seat models may soon be marketed because of the revised standard. Again, the better ones will be those which have passed crash-test requirements.

Before selecting a particular model for your child, be sure that it will properly fit into your car and that it is adaptable to your particular seat belt system. Before using a child safety seat which has been given to you or bought at a garage sale, be sure that it is one of the crash-tested models. Often these "hand-me-downs" are older devices which are inadequate to protect your child in a crash.

For more information,
ask your doctor or contact:
Toll Free TOT LINE 800 672-4527
the University of North Carolina
Highway Safety Research Center
Chapel Hill, N.C. 27514
(919) 933-2202

APPENDIX C

Shopping Guides

Shopping guides have been prepared for the following North Carolina cities:

Albemarle
Asheville
Boone
Charlotte
Chapel Hill
Clinton
Durham
Elizabeth City
Fayetteville
Franklin
Goldsboro
Greensboro
Greenville
Henderson
Hickory
Jacksonville
Kinston
Lumberton
Mount Airy
New Bern
Raleigh
Roanoke Rapids
Rocky Mount
Salisbury
Sanford
Shelby
Winston-Salem
Wilkesboro
Wilmington
Wilson

INFANT CARRIERS AND CHILD CAR SAFETY SEATS

AVAILABLE IN

CHAPEL HILL AND DURHAM, NORTH CAROLINA

This information on cost and availability of infant carriers and child car safety seats was compiled from telephone interviews made by the University of North Carolina Highway Safety Research Center under the auspices of the North Carolina Governor's Highway Safety Program. The listed models are recommended because crash tests have demonstrated their ability to protect young occupants. Devices that are not listed have been omitted because they have not been crash tested or because they performed poorly in crash tests.

The information in this buying guide is periodically updated.

MANUFACTURER	RECOMMENDED MODELS	PRICE RANGE	Before 'N After Baby Shop	Belk-Leggett (University Mall)	Belk-Leggett (Southsquare)	Best Products	Brendle's	Carpenter's Chevrolet	Coggin Pontiac	Harris-Conners Chevrolet	Ivey's	J. C. Penny	Long Chevrolet	Montgomery-Ward	Star Buick	Uzzle Cadillac-Oldsmobile	Yates Motor Company	
Ford	Infant Carrier																	
General Motors	Infant Love Seat	16.95-29.95				*		*	*				*		*	*		
Chrysler Corp.	Mopar Infant Seat	21.35															*	
Century	Trav-L-Ette																	
Collier-Keyworth	Bobby-Mac 2 in 1	33.00-47.95	*				*					*		*				
Collier-Keyworth	Bobby-Mac Deluxe	33.00-52.00	*			*	*											
Collier-Keyworth	Bobby-Mac Super Car Seat																	
Kantwet/Questor	Care Seat # 987 or 988	50.00			*													
General Motors	Child Love Seat	29.95-53.50				*		*	*	*			*		*	*		
Kantwet/Questor	Fitz-All																	
Rose Mfg.	Little Rider Harness																	
Chrysler Corp.	Mopar Child Seat	35.80															*	
Hedstrom	Positest Car Seat																	
Cosco	Safe and Easy #13203																	
Cosco	Safe and Easy #13313																	
Peterson	Safe-T-Seat	34.00-50.00			*	*												
Peterson	Safety Shell #74 or #75																	
Strolee	Strolee Car Seat #595																	
Bunny Bear	Sweetheart Seat #'s 70,70R,71,71R																	
Graco	Swyngomatic Safety Seat 300																	
International	Teddy Tot Astroseat V	33.00				*												
International	Teddy Tot Astroseat VI																	
Ford	Tot-Guard																	
Century	Trav-L-Guard	34.00				*												
Strollee	Wee Care	34.46-50.00		*		*	*				*			*				

*indicates device available from local outlet

APPENDIX D

Storybook
"How Children Safely Travel"

This booklet was created by the University of North Carolina Highway Safety Research Center under the auspices of the North Carolina Governor's Highway Safety Program as part of an effort to increase the use of child safety seats in the state.

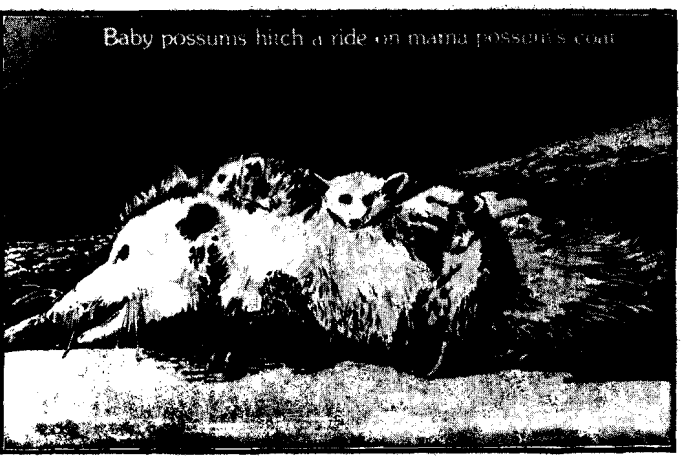
You can get more information on child safety seats from your [illegible] or from:

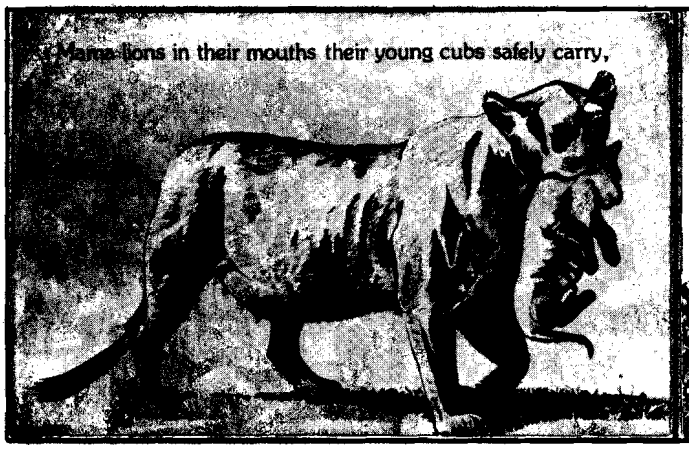
University of North Carolina
Highway Safety Research Center
CTP 197A
Chapel Hill, N.C. 27514
(919) 933-2202

It's your child's life.
But it's your decision.

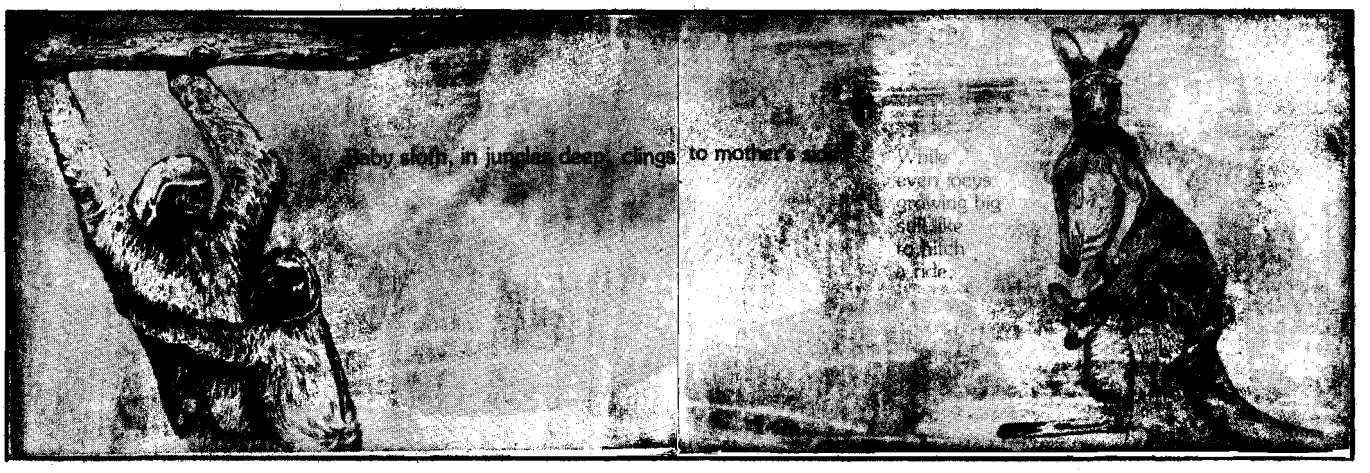
Written by Lauren Ogle and Frank Roediger. Illustrated by Lauren Ogle.

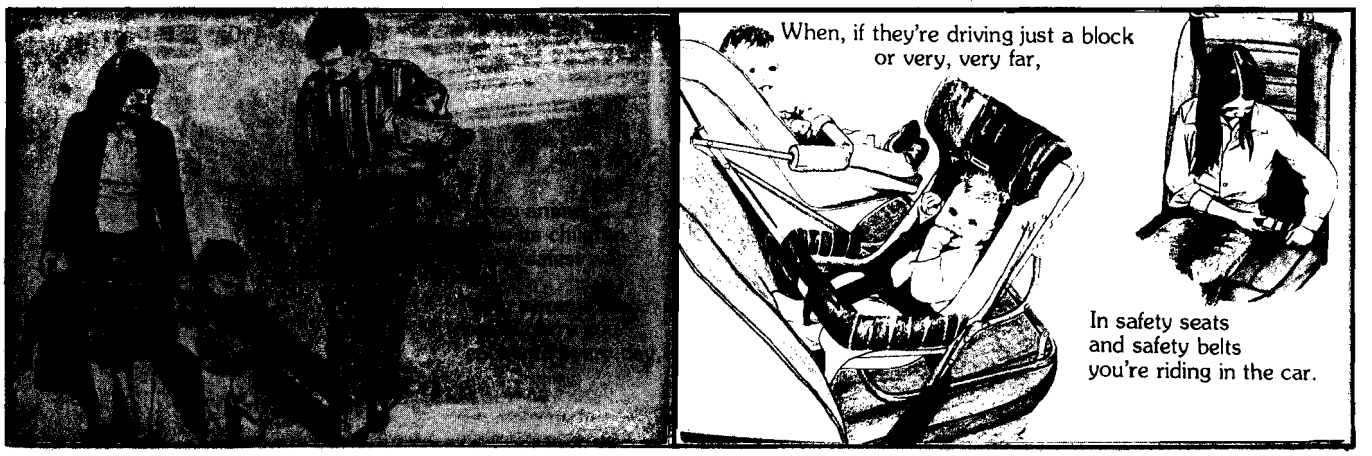
[illegible] otters ride while mother otters float,





Mama lions in their mouths their young cubs safely carry,


Baby sloth, in jungles deep, clings
to mother's side.


When, if they're driving just a block
or very, very far,
In safety seats
and safety belts
you're riding in the car.

APPENDIX E

HSRC Child Restraint Installation Procedures and Log Sheet

TETHER ANCHOR INSTALLATION PROCEDURE

Step 1. Refer to installation file for previous installations on make and model of vehicle for which you are about to make installation. If on file the diagram and notes may be followed but not without a visual inspection, as changes in location of parts and devices do occur, so for safety's sake ALWAYS inspect first.

Step 2. Locate spot to drill hole. If station wagon or vehicle without rear window package deck, the angle of tether strap from top of seat back to floor should not be less than 45 degrees. The hole should be through a sturdy metal surface and at least 1 1/2 inches away from any other holes or cutouts. Alignment of tether should be in a straight line behind child seat if possible.

Step 3. Drill pilot hole with small 1/8 inch drill first, then follow this with 21/64 or 5/16 bit for proper size to insert bolt.

Step 4. Fill hole with silicone rubber, insert bolt with anchor and secure with large washer on underneath side of deck or body.

Step 5. Fill out log sheet for installation.

Step 6. Draw an installation diagram if one does not already exist, noting any problems or problem areas on vehicle. Fill in appropriate section by Vehicle Make.

Step 7. When through, put everything back where it belongs.

CHILD RESTRAINT INSTALLATION LOG

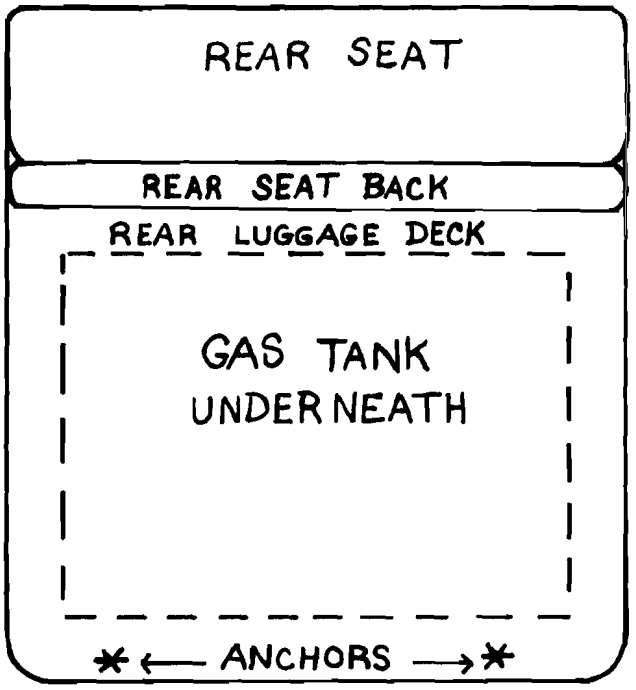
#	Date	Name, Address and Phone #	Year Make/Model of Car	Brand/Model of Restraint	Where CR Placed L M R Rear	Comments
		CHAPEL HILL, N.C. ( )	1979 CHEVROLET MALIBU S.W.	GM CHILD LOVE SEAT	L AND R	NO PROB.
		CHAPEL HILL, N.C. ( )	1972 VOLKSWAGEN BEETLE	GM CHILD LOVE SEAT	R	NO PROB.
		FUQUAY VARINA, N.C ( )	1976 BUICK CENTURY	GM CHILD LOVE SEAT	M	SEE FILE
		CARRBORO, N.C. ( )	1976 FORD MUSTANG II	STROLEE	R AND L	PRE PUNCHED HOLES SEE FILE
		PITTSBORO N.C ( )	1979 TOYOTA CORONA	GM CHILD LOVE SEAT	R AND L	SEE FILE

APPENDIX F

Example Tether Strap Anchor Installation Diagram

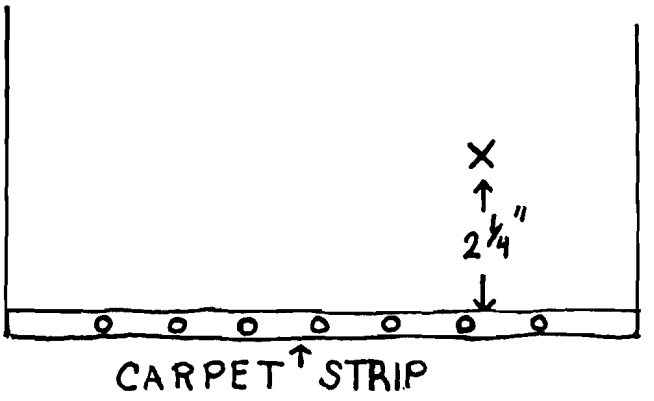
TOYOTA CORONA SW 1979

CHECK BEFORE DRILLING – Gas Tank Covers Most of Luggage Area



ANCHORS ARE 2¼" FROM REAR CARPET MOULDING STRIPS

NOTE – THERE IS VERY LITTLE LEEWAY IN THIS MEASUREMENT IT COULD BE AS MUCH AS 2½"



APPENDIX G

Program Agenda for Regional Workshops

AGENDA/OUTLINE
CHILD PASSENGER SAFETY WORKSHOP
April 24, 1980
10:00 a.m. - 1:00 p.m.

- Welcome

- Introduction

  Brief Introduction to Workshop Rationale, Contents and Instructors

- Statement of the Problem and Solution

  Child Death Rates and Causes
  Usage Rates for Child Passenger Protection Systems
  The Preventive Medicine: How the Child Restraint System Works
    - Physics of a crash
    - Children's bodies in crashes unprotected and protected (film)

- Types and Proper Use of Available Devices

  Three Main Types of Devices
    - Overview
    - Points parents should consider in purchasing
  The Two-Step Process to Proper Use (Workshop Participants in Hands-On Demonstration of Various Devices)
  Summary and Moving Up to Adult Belts

- Programs Aimed at Increasing Use: Educational Programs

  Types of Programs (Overview)
    - Public information and education
    - Small group education
  Keys to Success
  Resources Available

- Programs Aimed at Increasing Use: Distribution Programs

  Resources Available
  Concepts and Ingredients (Key Points)
    - What a loaner program is
    - Which device to use (infant versus child seat)
    - How to finance
    - Locating users
    - Precedent to follow

- Programs Aimed at Increasing Use: Legislative and Regulatory

  Summary of North Carolina Legislative Efforts
  Possible Use of State/Local Agency Regulations

- Local Coordination Roles

APPENDIX H

County DSS Survey Questionaire

Reply Form - Safety Seat Distribution Program for Foster Care Children

Please complete this form so that HSRC can make a preliminary estimate of your county's needs. If an exact answer is not possible, provide an estimate. Please return the form in the enclosed envelope, to UNC-Highway Safety Research Center.

Thank you for your interest in this program. We look forward to working with you.

Your name: _____ Address: _____

Title: _____ _____

(City) (State) (Zip Code)

Agency: _____ Phone: ( ) _____

1. How many children in your county does your agency serve each year? _____

2. Of these children, how many are a. under age one? _____

   b. between 1-5 years of age? _____

3. Referring to your answers in question 2, do these numbers represent a typical caseload of children in these age groups for your agency?

   Yes ____ No ____

   If no, please estimate how many children in your typical caseload are:

   a. under age one?_____

   b. between 1-5 years of age?_____

4. How many families in your county are licensed to provide foster care for children under age 5? _____

5. How many of the children in question 2 above are placed in these foster homes?

   a. under age one?_____

   b. 1-5 years of age?_____

   Is this a typical number in foster homes?

   Yes ____ No ____

   If no, please estimate typical number in your foster homes.

   a. under age one?_____

   b. between 1-5 years of age?_____

6. How many staff members are involved in transporting foster care children?

_____

7. Does the staff transport them in: their own vehicles? _____

state vehicles? _____

county vehicles? _____

(Indicate the approximate number of vehicles used in each category.)

8. Estimate the approximate number of trips per week each staff member will be transporting a foster child.

a. under age one?_____

b. between 1-5 years of age?_____

9. Do you presently promote the use of seat belts and/or child safety seats for agency staff and/or foster care parents?

Yes _____ No _____

If yes, please explain. _____

_____

_____

_____