Promoting Health and Safety in Child Care: A Review of the Literature and Available Resources

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Prepared for:

Links for Families
Boston Medical Center
Boston, MA

Prepared by:

Renee Schwalberg, Hilary Bellamy, Sheryl Anderson, Katherine Jacquart, Beth Zimmerman, and Judith Gallagher
Health Systems Research, Inc.
Washington, DC

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Table of Contents

I. Background and Overview 1

II. Promoting Health and Safety through Child Care 4

A. Assuring Health and Safety within the Child Care Environment 5
B. Access to Primary Care and Social Services 16
C. Health Promotion and Education Concerning Health and Safety and Child Development 20

III. Quality and Oversight for Child Care Services 26

A. Measures of Quality 26
B. Results of Quality Studies 28
C. Licensing Standards 31
D. Health and Safety Standards 34

IV. Model Approaches for Promoting the Coordination of Health and Child Care 36

A. Training Child Care Workers in Health and Safety Issues 36
B. Child Care Health Consultants 41

V. Resources to Promote Coordination of Health and Child Care 46

A. Federal Efforts to Promote Health in Child Care 46
B. Resources to Support Coordination of Health and Child Care 52

References 58

Appendix: Resources to Support Coordination of Health and Safety in Child Care

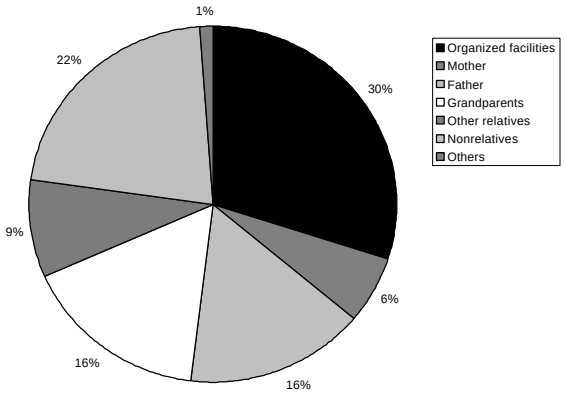
I. Background and Overview

Health and human service systems are changing, and as a result the demand for child care, and the demands on child care providers, are also changing. During the implementation of welfare reform plans and the transition of former recipients of Aid to Families with Dependent Children (AFDC) to work, an increasing number of children will require out-of-home care. Among middle-class families, the increasing number of hours that parents must work has meant that children are starting child care earlier in life and spending more time each day in outside care. In addition, new restrictions on eligibility for Supplemental Security Income (SSI) have required parents of children with special health care needs to work, thus increasing the need for child care providers for these potentially complex children. Therefore, as out-of-home care plays a growing role in children's daily lives, it has become more important than ever that child care services promote children's health, safety, and development.

It is well known that women with children are increasingly joining or remaining in the labor force. In 1996, 62 percent of women with children under age six were working or looking for work; 39 percent of mothers of preschoolers worked full time, as did 55 percent of mothers of school-aged children (ages 6 through 17). The proportion of mothers of preschoolers in the workforce increased approximately 32 percent since 1980 (U.S. Bureau of Labor Statistics, 1996). Data from the Census Bureau's Survey of Income and Program Participation (SIPP) show that these women are increasingly relying on paid, out-of-home child care for their children. In 1994, the last year the survey was conducted, 55 percent of families with employed mothers used paid child care, and 10.3 million preschool children required care while their mothers worked (Casper, 1994). Nearly 30 percent of these children were cared for in organized child care facilities, 15 percent received care in family day care homes, and 25.3 percent were looked after by a relative other than a parent. Overall, 51.5 percent of children under age six (and 47.5 percent of infants) whose mothers were employed were cared for by nonrelatives. Figure 1 shows the distribution of primary child care arrangements used by families of preschoolers in which their mothers were employed in 1994.

Over the past two decades, the use of organized child care facilities has grown dramatically; in 1977, only 13 percent of preschoolers were enrolled in group care centers or preschools, compared to 30 percent in 1994. These rates are likely to continue to grow as former AFDC recipients join the workforce and seek high-quality care for their children.

Figure 1. Primary Child Care Arrangements for Preschoolers used by Families with Employed Mothers: 1994



Source: SIPP, 1994

High-quality child care—that is, care provided by people with training in child health and development, in an environment that encourages children's growth and learning—comes at a price. Parents with incomes below the Federal poverty level spend an average of 17.7 percent of their monthly income on child care (compared to 7.3 percent for families living above poverty). Moreover, fewer than 20 percent of preschoolers in poor families in poverty receive care in regulated settings such as day care centers or nursery schools, compared to more than 30 percent of preschoolers in families living above poverty. Low-income families, therefore, are paying a higher proportion of their income for care in which the quality may be uncertain.

At the same time, new research on child development has emphasized the importance of high-quality care in early childhood and its impact on children's developmental and mental health. The National Institute of Child Health and Human Development (NICHHD) Study of Early Child Care, the results of which were released in 1997, found that one-on-one interaction with adults, including intensive attention and language stimulation in a child's first three years, was

related to better language skills, higher developmental scores, and greater school readiness in early childhood (NICHHD, 1997). Research on the lasting effects of early childhood education has shown that high-quality care in a child's early years can have long-term positive effects on school achievement and grade retention, and can reduce the need for special education (Barnett, 1995). Because low verbal and cognitive ability are associated with conduct disorders and antisocial behavior later in life, this care can also reduce rates of juvenile crime and other behavioral problems by mitigating these risk factors, particularly if support and intervention are provided to the parents as well (Yoshikawa, 1995).

These findings underscore the importance of ensuring that child care services provide a healthy, safe, developmentally enriching atmosphere for the children they serve. It is increasingly recognized that out-of-home child care does not just provide a place to put young children during the day; rather, it is the place where the next generation begins the process of growth and learning. As greater numbers of younger children, including infants, are placed in out-of-home care, it is important that this care provide support and encouragement to their social, emotional, and intellectual development. Older children also need educationally enriching after-school care.

In addition to promoting healthy development, child care providers are playing an increasingly important role in the overall system of health, social, and educational services for children. Child care providers can help identify children who need health insurance, refer children and families to needed health care and support services, and promote health and safety in the home as well as in the child care setting. For example, the expansion of publicly funded child health insurance coverage under the Balanced Budget Act will require substantial outreach to identify uninsured children in need of this coverage. The child care setting provides an opportunity to identify these children and their families, if providers of care are educated and trained to perform this function.

These complex needs demand an organized, comprehensive response on both the State and local levels. Fortunately, resources are available to assist in these efforts. For example, the Child Care and Development Fund (formerly the Child Care and Development Block Grant)

includes funds that are to be devoted to increasing the quality of child care in each State. The U.S. Department of Health and Human Services, Health Resources Services Administration, Maternal and Child Health Bureau (MCHN) and the Administration on Child, Youth and Families Child Care Bureau (CCB) have launched the Healthy Child Care America campaign, which supports States and communities in coordinating health and child care efforts. The centerpiece of this campaign is the *Blueprint for Action*, which provides communities with a set of concrete goals and action steps to complete. These agencies have also supported the development of a set of guidelines for child health and safety in out-of-home care, titled *Caring for Our Children* published by the American Public Health Association.

In addition, to support the coordination of health and child care systems on the State level, the MCHB established the Health Systems Development in Child Care (HSDCC) program in 1996. This program, which is a component of the MCHB's Community Integrated Service Systems (CISS) initiative, provides grants to agencies within each State to promote and support the development of mechanisms for coordinating health and child care systems. In 1997, the MCHB contracted with Health Systems Research, Inc. (HSR) to provide technical assistance to the HSDCC grantees.

This report, which was developed under the CISS technical assistance contract, presents a review of the current literature and available resources to support the coordination of health and child care systems and the development of high-quality, developmentally enriching care. The following chapters present, in turn, a review of the major issues related to child health and safety and their potential connection to child care systems; a review of the literature reflecting the current level of quality of care that children receive and the need for improved coordination with health care systems; a review of Federal, State, and local efforts to coordinate health and child care; and a discussion of the resources available to States and communities to pursue and promote coordination between these systems.

II. Promoting Health and Safety through Child Care

Paid child care presents an opportunity to bring children and families into health care systems and to provide education on good health and safety practices. At a minimum, child care must

provide a healthy, safe, and developmentally enriching environment in which children can spend their days while their parents work. Beyond this basic standard, however, child care programs can use their daily contact with America's children and working families to provide health-related linkages and services.

This chapter will examine the different health-related functions of child care, such as the assurance of health and safety, access to primary care services, and health education and promotion. These functions proceed from the basic expectation that child-care professionals will protect children from harm and use this contact as a way to improve the health status of children. In particular, this chapter discusses the research that has been conducted to date regarding health and safety in child care, the different arrangements that can be made to facilitate a child's entry into the primary health care system, and health promotion and health education efforts in child care programs across the country.

A. Assuring Health and Safety within the Child Care Environment

Child care settings can provide a healthy and safe environment for children by addressing the prevalence of safety hazards and injury in child care settings, the provision of food supplements in child care, immunization coverage of children enrolled in diverse child care settings, and the incorporation of children with special health care needs into day care settings. This section will end with a discussion of the need for health-related training among child care professionals, the barriers professionals encounter in obtaining additional training, and some of the model programs that have been instituted to deal creatively with problems in training systems.

1. Hazards, Injuries, and Safety Practices in Child Care

Injuries are the leading cause of death and disability among children (Rivara and Sacks, 1994). The potential years of life lost and the cost to society of caring for disabled children throughout the remainder of their lifetime makes the prevention of childhood injuries one of public health's greatest priorities. It is critical that child care providers receive training about injury prevention because investigators continue to demonstrate the widespread existence of safety hazards in child care.

- A prospective study conducted in licensed day care facilities in Seattle, Washington from July 1992 to June 1993 reported 53 injuries that required medical attention in 133 day care facilities. Of these injuries, 39 percent required stitches and 17 percent required a cast, splint, or sling. None of the children required hospitalization. Researchers investigated 69 of the sites, and in all cases found potentially correctable hazards, ranging from 7 to 26 hazards per child care site hospitalization (Cummings et al., 1996).

- A study conducted to determine the safety hazards present in licensed day care facilities in New Hampshire discovered that a significant proportion of licensed centers had one or more of the following burn and fall hazards: water over 130 degrees Fahrenheit (27 percent), space heaters that were within reach of children (14 percent), stairs without safety gates (30 percent), and a lack of safe surfacing materials underneath playground equipment (61 percent). This study surveyed home-based child care settings with one provider and those with more than one provider, as well as child care centers; however, the researchers found no significant differences in the extent of safety hazards by the type of child care setting.

  This same study examined child care providers' safety practices with respect to poisoning and other emergency episodes. The majority of providers store ipecac syrup for poisoning emergencies and most providers post the phone number for the poison control center and the local ambulance company. Ninety percent of those surveyed said that educational materials related to safety hazards and prevention practices would be useful to them. The authors, therefore concluded that child care centers are a "promising target for childhood injury prevention interventions." (O'Connor et al., 1992).

Most injuries sustained in child care settings are relatively minor (Olsen et al., 1996). The most serious injuries that occur—concussions, fractures, and dislocations—result from falls, which generally occur on playgrounds (Rivara and Sacks, 1994). Many studies have documented the great risk posed by playgrounds to preschool children (Landman, 1987; Aronson, 1983; Sheps and Evans, 1987). A study conducted by the Centers for Disease Control (CDC) reports that approximately one third of injuries experienced by preschool children in child care occur on the playground, with almost two-thirds of these playground-related injuries resulting from falls (CDC, 1988). Therefore, it is not surprising that a study which conducted on-site safety assessments found that 97 percent of child care centers do not have appropriate surfacing materials under playground climbing equipment (Davis and McCarthy, 1988).

A number of efforts are currently underway at the State level to improve compliance with health and safety standards for child care playgrounds. One such example is the Maternal and Child Health Bureau (MCHB)-funded Kentucky Health Systems Development in Child Care initiative, which focuses on playground safety in child care settings. Funded in October 1996, this CISS project titled, *Fun Play in Safe Areas*, is striving to promote safety awareness and practices in outdoor play areas through on-site playground assessment and staff training and consultation in more than 90 child care centers throughout the State during the next three years.

A number of resources are available to assist child care providers in assessing and improving the safety of outdoor play areas:

- *Stepping Stones to Using Caring for Our Children* contains numerous standards for ensuring playground safety.
- The Pennsylvania Chapter of the American Academy of Pediatrics designed the *Safety Checklist for Active Play Areas* based on the U.S. Consumer Product Safety Commission's Handbook for Public Playground Safety and the American Society of Testing and Materials (ASTM) standards.
- The National Program for Playground Safety sponsors a three and a half day training session through their National Playground Safety School, which can be reached either through their toll free phone line (800-554-PLAY) or their website (http://www.uni.edu/coe/playgrnd/main.html).
- The National Playground Safety Institute, a branch of the National Recreation and Parks Association, distributes a number of playground safety publications and offers a safety inspector certification course. See their website for more information (http://nrpa.org/playsafe/playsafe.html).

To most effectively reduce the incidence of injury in child care settings, experts recommend that prevention efforts focus on passive, rather than active, strategies (Rivara and Sacks, 1994). In other words, children are better served by playgrounds with proper surfacing materials than they are with increased supervision, as the first option is a one-time intervention and the second requires “repeated behavior change.”

However, in addition to making structural changes to children’s play environment, child care providers have an ideal opportunity to educate parents about safety hazards and childhood injury prevention. Through the child care setting, parents could receive information and training

on a variety of topics, including fire safety, passenger safety, CPR, and the importance of the use of bicycle helmets to name just a few. If parents are included in the effort to diminish childhood injury and are educated about injury prevention practices, they can use this information to change some of their behaviors in the home, further protecting the safety of their children.

2. Food Assistance and Standards in Child Care

The nutrition community envisions child care as an important stop over in the lives of America's children. For some children, child care may be the primary source for receiving nutrient-rich foods. In addition to providing food, child care providers can create an opportunity for children to try new foods that they may not eat at home, and can teach children the value of mealtimes and the enjoyment that can be derived from preparing and eating healthy foods.

The federally funded Child and Adult Care Food Program (CACFP) can help to provide healthy foods to children who need them. The CACFP was initiated in 1975 as a pilot project to provide child and adult day care facilities with healthy foods. In 1995, CACFP served 2.3 million children and 44,000 adults. This program, administered by the U.S. Department of Agriculture's (USDA) Food and Nutrition Service (FNS), supplies USDA commodity foods to day care centers. Day care providers must, in turn, serve snacks and meals that meet USDA guidelines and offer free or reduced-price meals to those who qualify based on family income.

The number of meals served to children in child care programs under this program has grown dramatically, from 493 million in 1982 to 1 billion in 1992 (American Dietetic Association, 1994). A telephone survey of a nationally representative sample of regulated and non-regulated preschool and child care programs found 30 percent of programs participated in the CACFP (Hofferth and Eliason Kisker, 1994). The CACFP serves a number of different types of child care centers, including licensed public and private not-for-profit centers, family day care homes, and Head Start centers.

The CACFP has been particularly effective in reaching licensed family day care homes, and in providing an incentive for other day care homes to become licensed. The telephone survey also

found that of those programs serving meals or snacks to children, a greater proportion of regulated family day care providers participate in CACFP (74 percent) than of center-based programs (30 percent). In addition, this study confirmed the fact that, compared to other providers, family day care providers that serve low-income children are more likely to participate in the CACFP (Hofferth and Eliason Kisker, 1994).

Child care programs that do not participate in this federally regulated program, however, should also be able to ensure that they are providing children in their care with nutritious foods. To this end, the American Dietetic Association (ADA) has released a technical paper to support its position Statement for nutrition standards in child care programs. This paper recommends standards in several areas:

- Meal plans. According to the ADA, menus served in child care facilities should be nutritional, as determined by the *Dietary Guidelines for Americans*, and should be tailored to the age of the children, the amount of time they spend in the facility each day, and the cultural and ethnic backgrounds of the children.

- Food preparation and food service. The ADA makes a number of recommendations concerning the types of foods children are served. Fat, sugar, and sodium should be kept to a minimum, and fruit and vegetables should be served in abundance. It also suggests that the proper amount of food be served to prevent hunger and maintain children's energy levels throughout the day. Finally, the ADA emphasizes food safety and sanitation in the handling and preparation of children's meals and snacks.

- Compliance with local and State regulations. The ADA promotes compliance with local and State health and safety regulations that pertain to food and sanitation (ADA, 1994).

In addition to the CACFP, the Cooperative Extension Service is another resource available to child care providers who are not federally regulated. This program provides a number of nutrition education services to rural communities and to low-income individuals.

- In fact, 37 States have Family Nutrition Programs, many of which are administered by the Cooperative Extension Service, to provide nutrition education and food preparation skills through one-on-one counseling and group classes to food stamp-eligible families. The target audience and focus of these programs vary by State, and in some cases, by county; however, some of these programs provide nutrition education training to agencies that work with families, such as child care centers and Head Start (Anliker et al., 1998).

- The Cooperative Extension Service also sponsors the National Network for Child Care which houses an Internet database of more than a thousand publications and resources, many of which are related to food and nutrition (http://www.nncc.org/Nutrition/nutr.page.html).

- The Nutrition Education and Training (NET) Program also makes its products related to nutrition and child care available via a searchable database on its website (http://www.nal.usda.gov/fnic/net). This database includes curricula, newsletters, brochures, training manuals, and more. The NET Program is funded by grants to States from the Food and Nutrition Service of the USDA, and seeks to support nutrition education for children through the National School Lunch and Breakfast Programs and the Child and Adult Care Food Program.

4. Immunization

A focus on immunization is a critical element in a child care center's health promotion strategy, because children can be exposed to infectious diseases during day care, which can also provide access to critical preventive health services. Laws exist in almost all States requiring age-appropriate vaccination for children attending licensed day care facilities, which has lead to relatively high immunization rates among children in licensed child care centers (Cochi, 1994). In fact, 94 percent of two-year-old children in licensed child care facilities are fully immunized (CCB, no date). Data collected annually from licensed day care and Head Start programs reveal that the estimated vaccination levels for children aged two to five are quite close to the levels achieved for children entering kindergarten and first grade (Cochi, 1994). This could be due to the fact that parents are required to show proof of immunization for their children to enroll them in day care facilities. Higher rates for children in day care could also be attributed to efforts of day care facilities to provide for, arrange, promote, or monitor the continued age-appropriate vaccinations of children in their care.

However, laws requiring age-appropriate immunization apply only to licensed facilities, which do not include many of the family day care homes across the country. It is, therefore, not surprising that children who attend licensed day care have higher vaccination levels compared to those who do not (Cochi, 1994).

The measles outbreak of 1989 and 1990 is a good example of how child care, if utilized as a point of access into the primary care system, could assist parents in obtaining immunizations for their preschool-age children. Half of the measles cases in 1989 and 1990 occurred in unvaccinated preschool-age children, many of whom were minority children (Cochi, 1994). The outbreak has been attributed to the fact that these children did not receive the initial dose of the measles vaccine at the appropriate time. This failure revealed a number of weaknesses in the health care delivery system, particularly the barriers that parents confront in accessing and navigating the primary health care system.

Given the fact that such a high percentage of children enrolled in licensed child care facilities are fully immunized, researchers have explored the prospects of using other child care settings to promote immunization. Pertowski and colleagues proposed using licensed family day care providers in San Mateo County, California to evaluate children's immunization coverage and refer them for vaccinations if they had not received the full schedule of shots. They found that only 83 percent of preschool-age children in licensed family day care had received the complete immunization schedule. The first step in their study was to assess providers' knowledge, attitudes, and beliefs concerning immunization to determine if this was a viable strategy for increasing age-appropriate vaccination coverage of school-age children. The baseline survey revealed that only 55 percent of providers could identify childhood diseases that can be prevented by vaccination and only 18 percent could "correctly interpret sample vaccination records." Their initial study concluded that family day care providers need to be educated before the children can effectively screen children in their facilities to determine if they have received the complete series of vaccinations (Pertowski et al., 1994).

5. Preventing and Managing Infectious Diseases in Child Care

While immunization is effective in preventing a host of childhood illnesses, children in day care centers often suffer from mild viral and bacterial infections. Research has identified some of the risk factors related to disease transmission among children in child care settings; however, more work needs to be done in mitigating the impact of these minor illnesses on providers, parents, and children.

A child's age and the child care facility itself are the two greatest categories of risk factors for the transmission of infectious diseases. Young children who have not yet been toilet trained, those that cannot wipe their own runny noses, and those that put everything and anything into their mouths pose "age-specific personal hygiene" risks in a child care setting. Also, physiological factors that are present in the early childhood years increase a child's risk for developing some infectious diseases. For example, middle-ear infections and upper respiratory viral infections are common in young children, and are related to the age-specific risk factors posed by the dysfunction of the eustachian tube found in the ear (Osterholm, 1994).

In addition to the age of the children being cared for, characteristics of the facility, such as the number of children and the practice of mixing different age groups of children in attendance also affect disease transmission. For example, the more children attending a child care center, the greater the risk that one will introduce an illness. The frequency of older, toilet-trained children interacting with pre-toilet-trained children also affects disease transmission, with such interactions increasing the potential transmission to older children for certain illnesses and increasing the risk of transmission to younger children for other diseases. Certain practices or methods of diapering and wiping runny noses have also been attributed to an increased risk of disease transmission (Osterholm, 1994).

Most infectious diseases documented in child care settings are classified as "primarily affecting the respiratory tract; primarily affecting the gastrointestinal tract and liver; as invasive bacterial disease; as primarily affecting the skin; and as primarily affecting multiple organ systems" (Osterholm, 1994). The most common diseases are those affecting the respiratory tract, with 10 viral and 7 bacterial agents having been documented in child care settings (Osterholm, 1994).

Because disease transmission in child care is common, and because of the costly impact it has on society in terms of parents' absences from work and children's sick days, the prevention and reduction of disease transmission in child care is a high priority. As discussed later in this chapter, studies have been conducted and interventions put in place to decrease the incidence of infection through providing handwashing curricula and modified diapering techniques to child care providers. In addition to hygiene-related instruction, both child care providers and parents

need information about exclusion criteria for mildly sick children. More alternative child care programs should be developed to care for mildly sick children so that sick children do not compromise the health status of other children in the facility and so that parents can go to work when their children have an mild infection. Some efforts along these lines have been developed by State-level health and child care system building initiatives.

- The Georgia Health Systems Development in Child Care CISS grantee, based in the Child and Adolescent Health Department of the State's Division of Public Health, developed a colorful, laminated, poster-size communicable disease chart to assist child care providers in identifying symptoms of common childhood illnesses and applying exclusion criteria for sick children.

- The Pennsylvania Early Childhood Education Linkage System (ECELS) Program developed a booklet titled "Preparing for Illness" that provides guidance in recognizing when a child is sick, handling a sick child's return to child care, and developing and applying inclusion and exclusion criteria for children with acute illnesses. The largest portion of the booklet is dedicated to tables of information listed by both symptom and illness. This booklet is available for purchase through the National Association for the Education of Young Children.

6. Children with Special Health Care Needs (CSHCN)

Action Step Eight in the Healthy Child Care America Campaign attempts to "expand and provide ongoing support services to child care providers and families caring for children with special health needs." (CCB). The *National Health and Safety Performance Standards* Technical Panel on Children with Special Needs defines children with special needs as those with "developmental disabilities, mental retardation, emotional disturbance, and chronic illness, as well as those with sensory or motor impairments." (Cohen, 1994). It is estimated that between five and thirty percent of children have some type of special health care need, depending on the definition (Newacheck and Halfon, 1998; Newacheck and Taylor, 1992).

There are few available data that estimate the proportion of children in out-of-home child care who have special health care needs. A study conducted in 1987 reported that almost two-thirds of child care centers in New Haven, Connecticut provided services for CSHCN; however, each center had small numbers of children with disabilities under their care. This study also revealed that child care providers had little interest in increasing the number of children in their facilities

that have special needs (Parrino and Thacker, 1994). An earlier study conducted in Santa Monica, California found that only one percent of children enrolled in day care centers had special health care needs (Berk and Berk, 1982).

Some posit that with the growth in the number of children infected with HIV/AIDS and the current number of children affected by prenatal substance use, the number of children with disabilities that will require child care is increasing (Cohen, 1994). Three pieces of legislation have been instrumental in mainstreaming CSHCN into child care:

- Federal Public Law 94-142, the Education of All Handicapped Children Act, was passed in 1975 and called for the inclusion of children with disabilities who were 3 years or older in child care settings, including those facilities that cared for children without disabilities. This legislation also provided for training of staff in how to care for CSHCN (Parrino and Thacker, 1994; Riley, 1994).

- Public Law 94-457, Part H, Amendment to the Federal Education of the Handicapped Act, passed in 1986, broadened the scope of the earlier law by extending the mandate to include children under the age of three. This law also called for increased coordination among health and social service agencies, and the families of disabled children (Parrino and Thacker, 1994; Riley, 1994).

- The Americans with Disabilities Act, made great strides in guaranteeing access to child care for all children. Signed into law in 1990, the Act applies to both public and private child care centers and includes several important mandates. The Act makes it illegal for child care centers to exclude children with disabilities and requires centers to eliminate policies or practices that would impede the enrollment of disabled children. In addition, this legislation mandates the removal of physical barriers and requires that steps be taken to facilitate communication with sensory impaired children (Parrino and Thacker, 1994).

In order to accommodate and provide high quality services to CSHCN of various ages, child care providers need training. In fact, a lack of training for staff is often cited as a reason not to mainstream more CSHCN into child care settings outside the home (Perrino and Thacker, 1994). Other barriers to inclusion are the additional costs of special equipment (Parrino and Thacker, 1994), a lack of staff (Dewey and Gaensbauer, 1997), and concerns about liability (Cohen, 1994).

- A survey to assist program planners in assessing the capacity of providers to serve children with special health care needs was conducted by the Tennessee Health Systems Development in Child Care CISS grantee. This survey of 568

child care centers revealed that many child care providers do not feel comfortable or prepared enough to care for children with special needs. Those providers that did have children with special needs in their care, generally served children with speech, hearing, and language problems, developmental delays or mental retardation, allergies, or asthma (Dewey and Gaensbauer, 1997).

If given the proper training, providers reported that they are willing to serve children with some conditions. Survey results show that the majority of providers would be willing to care for children with speech and language impairments (96%), learning disabilities (91%), hearing impairment (85%), visual impairments (78%), and mental retardation (70%). Fewer providers, though still a majority, would be willing to care for emotionally disturbed (62.5%) and motor impaired (61.1%) children (Dewey and Gaensbauer, 1997).

Child care centers offer a natural point of entry into the population of pre-school age children in the United States, and most children's developmental disabilities are currently detected in schools (Robert Wood Johnson Foundation, 1988). Thus child care centers may serve as channels for identifying and referring children in need of special services (Parrino and Thacker, 1994).

In response to the need for more staff training in this area, slightly more than half of the States have used Child Care Development Block Grant (CCDBG) funds to develop education and resource and referral initiatives and systems to better serve CSHCN (Child Care Bulletin, September/October 1995).

A number of national and local resources are available that strive to enrich and advance the knowledge of child care staff and health and social policymakers with regard to children with disabilities:

- The *Map to Inclusive Child Care Project* sponsored by the U.S. Department of Health and Human Service's Child Care Bureau and directed by the United Cerebral Palsy Association[1], is a new Federal initiative striving to improve the quality of child care services for children with special health care needs and their families. This project aims to ensure that CSHCN will have access to mainstream child care. Through this project, States are encouraged to assemble

[1] Subcontractors on this project include the National Conference of State Legislatures, Zero to Three, the National School-Age Care Alliance, the National Child Care Association, the Federation for Children with Special Needs, and the University of Connecticut Health Center.

a team of stakeholders, including representatives of public and private child care systems and the State Child Care and Development Fund Administrators, and to compete for funding to address multiple, interrelated aspects of their child care delivery systems. In the first year of the project, 10 States will be selected to receive technical assistance to facilitate a strategic planning process in which the various States will identify their most critical issues and develop strategies and timelines both for improving and expanding their child care service delivery systems, and for increasing the inclusiveness of child care for special needs children.

- The Tennessee Health Systems Development in Child Care CISS grantee is working to increase child care providers' capacities to serve children with special needs. Inclusion issues are the focus of the grantee's annual systems development conference. Specifically, effective communication with parents, the linkage of children with special needs to primary and specialty health services, and the use of adaptive play equipment will be addressed. One of the CISS grantee's systems partners, the Childcare Resource Center at Signal Centers located in Chattanooga, Tennessee currently provides technical assistance and training to providers in a nine-county area who care for children with special needs. The Resource Center also loans appropriate toys and equipment to providers caring for children with disabilities (Child Care Bureau, September/October 1995).

B. Access to Primary Care and Social Services

For the most part, young children are a healthy group. Though they may fall ill with short-term respiratory and gastrointestinal illnesses, these maladies pose little threat to the overall health and well-being of children. However, short-term infectious diseases transmitted in child care centers cause considerable inconvenience for parents who are often forced to miss work as a result of their children's illnesses. Taras and colleagues reported that, on a given day, approximately 16 percent of children in day care are sick (1993). As mentioned, some of the most common health issues in child care are injury and infectious disease, including respiratory disease, gastrointestinal illness, skin rashes and infestations (such as lice and scabies), and viral infections (Olsen et al., 1996). In addition to these acute infections, young children are also likely to have problems with speech, hearing, vision, nutrition, dental care, child abuse, and behavioral problems (Chambers and O'Mara, 1992). Child care presents an opportunity to screen children for these developmental, sensory, and health problems and to make referrals to primary care or specialty providers that can attend to these children's special needs.

Increased access to primary care and social services for children can be accomplished in several ways. Child care centers can serve as outreach stations through which health and social service agencies can reach children, particularly low-income children who qualify for State- and federally funded health and social service programs. Comprehensive health services can be arranged and provided directly to children through their child care providers. The term "linkages" is often used to describe the connections that can be made between child care providers and other providers of services for children and families. Sometimes referred to as the "new neighborhoods,"child care centers can be productive outlets for conducting outreach to millions of the working poor who may not be aware of their eligibility, and therefore may not be taking advantage of the health and social service programs for which they are eligible.

For example, child care programs can provide an avenue to reach the approximately 30 million children who are eligible for Medicaid but are not yet enrolled in the program. Children receiving child care subsidies have family incomes below 150% of poverty, and therefore qualify for Medicaid in many States, where the income cutoff is above the minimum eligibility guideline of 133% of poverty set by the Federal government. Oxendine Poersch and Blank outline two ways that child care providers[2] can work with Medicaid to increase program participation and the health coverage of children in child care.

- Medicaid Eligibility Determination and Enrollment. Child care providers can arrange for Medicaid enrollment workers to come to the child care facility to assist families who wish to enroll in Medicaid and to answer parents' questions about the program.

- Medicaid Outreach. Child care centers have two options for facilitating Medicaid outreach:

  - Child care and Head Start centers can subcontract with Medicaid providers to conduct outreach at their location. Connecticut and New Hampshire have made such arrangements with private, non-profit organizations.

[2] The report published by Oxendine Poersch and Blank specifically addresses ways in which Head Start and child care programs can more effectively work together. Many of the suggestions for facilitating access to services for children in child care would be greatly facilitated by the additional funding streams available to Head Start programs that most child care providers currently do not have access to.

- Child care centers can become Medicaid providers themselves in order to draw down Federal funds for providing health services to their enrolled children. For example, CHILD, Inc. in Rhode Island provides outreach and referral services that are reimbursed by Medicaid. As a result of this effort, the State's Medicaid participation rates have increased and families have benefited from the receipt of additional services (Oxendine Poersch and Blank, 1996).

In addition to determining Medicaid eligibility and conducting outreach for Medicaid, child care providers can provide transportation and screening services directly to Medicaid-eligible children (Oxendine Poersch and Blank, 1996).

- Provide Transportation to Medical Services. Child care centers or family day care homes can schedule group visits to health centers for their enrolled children. Like outreach services, transportation to medical services can be reimbursed through the Medicaid program.

- Provide Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) services. Linkages with child care and the EPSDT program facilitates the early identification of health problems in children so that they can be addressed in a timely manner to ensure the best possible outcomes. Child care providers can either subcontract with another entity to provide these services, or they can become Medicaid providers themselves. Health care professionals can visit child care settings—family day care homes or center-based care—to screen children for a variety of childhood health problems.

  - Idaho, for instance, utilizes public health nurses to conduct EPSDT screenings at child care centers throughout the State (Simonne deGlee, personal communication).

  - A child care center located in St. Louis, Missouri has arranged for its speech, physical, and occupational therapists to become Medicaid providers so that they can be reimbursed for serving children enrolled in the Medicaid program (Oxendine Poersch and Blank, 1996).

Another mechanism for linking children in child care to health services exists through the new child health insurance initiative. The Child Health Insurance Program (CHIP), established by the Balanced Budget Act of 1997, will create a new challenge for States, as they face the task of reaching out to new groups of children and informing families of the availability of insurance. Child care centers present an ideal opportunity to reach children and their families early and to inform them of the coverage options available to them. Child care providers can be educated

about these programs so that they can refer families to local social service offices or other agencies where they can apply for these and other programs.

Other strategies for using child care as a means of increasing children's access to primary care involves screening for health problems, arranging for the provision of care, or directly providing services onsite. For example, it has been suggested that child care providers could assess children for an array of health and/or developmental problems, including vision and hearing, immunizations, lead poisoning, nutrition assessment, developmental assessment, and child abuse (Randoph, 1994). Some centers, such as Head Start, already provide medical and/or dental services onsite.

Hofferth and Eliason Kisker conducted a study of child care providers—both family day care and center providers—that offer supplemental health-related services such as testing, screening, physical examinations, and nutritious foods (1994). This study included a nationally representative survey of child care centers and both regulated and non-regulated family day care providers. The sample of approximately 2,700 providers also included Head Start, part-day, and public school- and church-sponsored programs. Table 1 indicates the proportion of all early childhood programs surveyed, as well as the proportion of Head Start programs surveyed that offered a variety of supplemental services.

Table 1.
Proportion of Child Care Providers Offering Additional Services

Supplemental Services	*All Programs*	*Head Start*
Hearing, speech, or vision testing	55%	99%
Testing for cognitive development	43%	97%
Testing for social development	42%	95%
Psychological testing	23%	89%
Dental examinations	16%	81%
Physical examinations	13%	71%

Source: Hofferth and Eliason Kisker, 1994.

Researchers found that providers serving low-income children were more likely to provide some or all of these services compared to centers that do not serve primarily low-income families, with Head Start being the most likely to provide additional medical services to children enrolled in its programs. Public school-sponsored programs were the next group most likely to provide many of these services. Independent and chain for-profit organizations were the least likely to offer these services to children in their care (Hofferth and Eliason Kisker, 1994). This study underscores the feasibility of delivering medical services to children in a child care or early childhood education setting.

C. Health Promotion and Education Concerning Health and Safety and Child Development

In addition to caring for children and helping them gain access to the primary health care system, child care can be used as forum for health education and promotion efforts targeting both children and their parents. Child care centers are well positioned to serve as an educational resource on a number of issues ranging from lead poisoning to passenger safety. Not only will informed parents be more likely to put health prevention and promotion practices in place in their homes, but they may also become more aware of particular health problems, and in turn, increase their demand for primary care services for their children. This information can be communicated in a number of ways, such as the following:

- Health professionals can act as health consultants by providing technical assistance and support to child care facilities and delivering informative talks to providers and parents on certain health issues. This will be explored in greater detail in Chapter IV.

- Child care providers can facilitate the election, or assignment of, primary care providers for children in their care, plan health and safety trainings for staff, assist parents with breastfeeding while their children are in child care, and make linkages with the local public health office.

- Parents can learn the health and safety aspects of child care, consider these components when selecting child care providers, and ask child care workers for information and guidance with respect to nurturing development and ensuring the health and safety of their children both in and out of the home (Tonniges, Healthy Child Care America, December 1997).

Two recent studies have shown that health promotion efforts directed at child care centers can be effective in decreasing childhood illness and injury.

- A study was conducted of 29 children ages 6 weeks to five years of age enrolled in a university child care center. The researcher took baseline measures of the children's health and then again once a week for four weeks. After the initial assessment, a nurse delivered a health promotion program to center staff on primary care issues such as identifying childhood illness, controlling infection, preventing injury, and administering first aid. The study found a significant decrease in upper respiratory illness and injury episodes after the health promotion intervention (Ulione, 1997).

- Another researcher assessed the effect of an instructional handwashing program on children's wellness, using a longitudinal case control study for 21 weeks with three to five-year-old children in child care. A handwashing curriculum, including frequent and proper handwashing techniques, was given to both the children in child care as well as the teachers. After 21 weeks, results indicated that the test group had significantly fewer colds than the control group, which continued its usual handwashing procedures (Niffeneggar, 1997).

Health promotion efforts related specifically to safety, nutrition education, and cognitive development can also be delivered effectively through child care settings. These efforts are discussed in the following sections.

1. Safety

In addition to providing a safe setting for children during the day, child care centers also offer the opportunity to teach parents about environmental hazards in the home. This is especially important given the research findings that, despite the hazards that exist in child care centers, they are often safer than children's homes. While two studies reported comparable injury rates for children at home and those in day care centers (Landman and Landman, 1987; Cummings et al., 1996), other have demonstrated that preschool children are more often injured in the home than in day care centers (Gallagher, Hunter, Guyer, 1985; Rivara et al., 1989; Gunn et al., 1991). In particular, injuries resulting from burns, poisonings, and motor vehicles are more prevalent during home care (Rivara and Sacks, 1994). Injury rates are the highest for poor children, in general; however, when injury rates of poor children were considered within child care centers, the risk factor of poverty is diminished, as child care centers may be safer than the homes of many poor children (Sacks et al., 1989). However, it is important to remember that,

in some States, family-based child care is unlicensed. As a result, it is difficult to include family day care homes in studies of injury episodes and to estimate the relative safety of family-based care versus center-based child care.

2. Nutrition Education

Child care centers are also optimal environments in which to teach children about the nutritional value of foods, as well as to guide parents in addressing any nutrition problems or poor eating habits of their children (Taras et al., 1994). In addition to supplying children with nutritious foods, the American Dietetic Association (ADA) emphasizes the potential benefits of educating children in child care about healthy eating habits. In a technical paper written to support its position Statement for nutrition standards in child care programs, the ADA addressed nutrition education, safety during meal times, and fostering a positive eating environment.

- Nutrition Consultation and Guidance. The ADA recommends that nutrition education be a part of every child's day and that child care workers be trained in nutrition education and food preparation.

- Physical and Emotional Environment. The ADA emphasizes the need for children's eating environments to be safe and appropriate for the different ages of children in child care. In particular, furniture and eating utensils should be safe. Also, staff should model family meal times during a child's day care experience, by promoting conversation and a relaxed atmosphere.

3. Cognitive, Emotional, and Social Development

In addition to keeping children healthy and safe during the day, child care offers an opportunity to foster cognitive, emotional, and social development. Many studies have investigated the effects of child care on the development of infants and children, some of which have focused closely on the relative effect of the particular child care setting, and others have examined how the quality of the child's experience in child care affects his or her subsequent language and cognitive abilities. Some of these studies take into consideration characteristics of the child that could independently affect cognitive development, and others consider family influences. These issues include:

- The child's age when he or she is placed in child care;

- Characteristics of the child, including gender, age, health status, and personality;
- The family context, including the "emotional climate," the involvement of the father, and the extent of parent-child communication; and
- Material resources available to the child, such as books and other learning tools.

As noted, a number of studies indicate the importance of the quality of infant and child care on cognitive development. According to the literature, quality of infant and child care is measured in several ways. Both structural and process measures are used to evaluate the quality of child care. Examples of structural measures that are believed to affect children indirectly include group size, number of hours children spend in day care each day, staff turnover, teacher education and training, and child-adult ratios. Process measures, which are believed to influence children directly include the sensitivity and responsiveness of caregivers to children's needs, communication from caregivers, and the children's participation in developmentally appropriate activities (Broberg et al., 1996; Burchinal et al., 1996). These indicators will be discussed in more detail in the next chapter.

In her opening remarks at the White House Conference on Child Care held on 23 October 1997, Hillary Clinton referred to the recent research that has shown that quality child care can positively affect the development of both infants and older children (Child Care Bulletin, September/October, 1997). Research indicates that infants begin to learn motor development, emotional control, social attachment, and vocabulary before they turn one year old, with math and logic skills beginning to develop sometime between a child's first and second birthdays (*Newsweek* Special Issue, Spring/Summer 1997). In recent years, the approach to childhood development has changed from the time when preschool-age children were asked to learn to count and recite the alphabet. Instead, experts are now promoting the importance of nurturing, as research has shown that early social and emotional experiences have a profound impact on a child's later cognitive development. As a result of this shift, early childhood educators are encouraged to focus on their sensitivity and responsiveness to children's needs and experiences and to support children's explorations of their environment (Hancock and Wingert, Spring/Summer 1997).

The literature examines both the cognitive development of infants and children that attend child care programs; however, there are fewer studies that attempt to determine the impact of infant care on cognitive development. This is likely due to the fact that in 1990, fewer than 10 percent of infants in the United States were enrolled in center-based care programs; however, that number is increasing rapidly (Kisker et al., 1991).

- The quality of center-based child care was found to be positively correlated with cognitive development, language development, and communication skills in 12-month old, African-American infants in North Carolina (Burchinal et al., 1996). This study did not find any child or family characteristics to affect the association between quality of child care and cognitive and language development.

- Another study confirmed that the language development of middle-class infants placed in lower-quality, center-based care was poor compared to infants cared for at home by relatives, or in family day care settings (Melhuish et al., 1990).

- On the other hand, preschool children cared for in high-quality day care settings when they were infants scored higher on language and cognitive development tests compared to their peers (Burchinal, et al., 1989).

Given the positive relationship between quality of infant and child care on future development, it is important that child care workers receive training in how to support and foster children's development. It is also important that they share this information with parents who can extend these positive practices into the home environment. For example, *Newsweek* offered tips for facilitating toddlers' language development. Speaking in a higher pitch, using short phrases, repeating and embellishing children's phrases, and using pronouns are thought to help children learn to understand language (Spring/Summer 1997). This is just one example of information that can be transmitted from child care providers to parents so that a child's development is not only encouraged in the child care setting, but also in the home.

Similar findings have been reported for older children in day care—children placed in high-quality child care settings demonstrate increased cognitive skills when tested compared to their peers who did not attend quality child care programs. A recent study was conducted in Sweden and its findings are echoed in a few studies performed in child care programs in the United States.

- A prospective, longitudinal study of both center-based and family day care in Sweden examined a number of factors that are thought to contribute to a child's cognitive development: number of siblings, the extent of a child's "inhibition," family background, quality of home care, paternal involvement, time in day care, and quality of child care. Children entered the study at the average age of 16 months, and researchers studied their cognitive abilities at five points during a seven-year period. The last data were collected when the children were in second grade.

  Results indicated that children who had spent more time in center-based care by the age of three and a half tested better in verbal and math abilities than did children who had been in home care and family day care. The quality of out-of-home child care was correlated with the math abilities of second grade children; however there was no correlation between quality of care and verbal aptitude in second grade.

  Though the quality of the home environment was predictive of verbal abilities when the children were younger, these effects seemed to have disappeared by the time the children reached second grade (Broberg, et al. 1997).

- A study conducted in the United States reported similar findings concerning the verbal intelligence of preschool and school-age children (Luster and Dubow, 1992).

- Another U.S.-based study showed increased cognitive abilities of children who had attended quality out-of-home day care (Clarke-Stewart, 1991).

- Still other researchers report attendance at high-quality early intervention centers is associated with academic and cognitive performance among children from low-income families (Campbell and Ramey, 1994).

Child care providers are in a unique position to play a number of important roles in the lives of America's children. Research has shown that the network of child care providers and the systems that have been put in place to monitor them have actually improved injury rates and immunization of children in their care compared to those cared for by parents or relatives. While entrusted with the safety and well-being of millions of children each day, child care providers are poised to do much more than assure their safe return to parents at the end of the day. The next chapter will review the research regarding the quality of child care that children currently receive and the systems that are currently in place to help families and caregivers take advantage of these opportunities.

III. Quality and Oversight of Child Care Services

Children and families' ability to take advantage of the potential for coordination between health and child care systems depends on the ability of child care providers to offer comprehensive, coordinated, developmentally enriching care. (In turn, child care providers' ability to offer this care is directly related to the level of resources and support provided to them.) Although some children do receive care of this level of quality, recent research shows that most do not (Love et al., 1996; Helburn, 1996). The quality of care provided by most centers ranges from poor to barely adequate (Child Care Bulletin, 1997; Helburn, 1995), and the quality of family home child care varies, but in general tends to be mediocre as well (Helburn, 1996). This chapter will review the results of recent research regarding the quality of child care currently provided in the United States, the regulatory systems in place to monitor and improve the quality of child care, and the implications of these systems for the provision of health information and services in child care settings. First, however, we present a brief summary of the types of indicators used to assess the quality of child care services.

A. Measures of Quality

The National Institute of Child Health and Human Development defines high-quality child care as care involving a high degree of positive interaction between caregivers and children (Kontos et al., 1994). Studies of quality in child care include measures of staff-child interactions and numerous other variables. Although the variables used differ from study to study, three dimensions of quality tend to be measured consistently (Helburn, 1996). These dimensions are:

- Process/interactional quality, or how children experience care;
- Structural quality, including the objective aspects of the program that are often regulated through licensing; and
- The adult work environment or larger context of the program.

The literature shows significant variation in the specific indicators selected to assess each of these three domains. Examples of the indicators that may be used to monitor quality in each domain are presented in Table 2 below.

Table 2. Sample Indicators of the Quality of Child Care		
Domain		
Process	*Structure*	*Adult Work Environment*
Staff-child interactions (positive, neutral, or negative); sensitivity; harshness; involvement	Total enrollment	Salaries and benefits
Program content (flexibility, age-appropriate activities and curriculum)	Child-staff ratio	Stability (staff turnover and child movement)
Environment (health/safety aspects; appropriate furnishings, equipment, and materials)	Staff education (formal, experience in child care, and specialized child care training.)	Providers' perceptions of work and director's experience and interaction with staff
Source: Helburn, 1996		

The importance of quality in child care has been a source of controversy. Lawmakers in particular have been skeptical of the importance of increasing quality for fear of increasing costs beyond families' reach (Love et al., 1996). However, research has shown that quality is only moderately related to the cost of providing services. In one study, the cost of high-quality child care programs were only 10 percent higher than those in programs of average quality (Kagan, 1995), and another study found that higher fees are not consistently associated with higher-quality programs (Helburn, 1996).

The importance of quality has been supported by research indicating that children in poor-quality child care programs are likely to be delayed in language and reading skills and to display higher levels of aggression toward children and adults (Children's Defense Fund, 1997). In addition, a 1994 Carnegie Corporation study indicates that "the quality of young children's environment and social experience had a decisive, long-lasting impact on their well-being and ability to learn" (Carnegie Corporation, 1994).

B. Results of Quality Studies

The quality of center-based child care has been shown to be primarily related to higher staff-to-child ratios, staff education, teacher turnover, administrators' experience, and effectiveness in

curriculum planning. Teachers' salaries, education, and specialized training were the most important characteristics distinguishing programs of poor, mediocre, and high quality care (Kagan, 1995). Programs with staff who are educated in child development, are well compensated, have higher staff-child ratios and smaller group size, and have low turnover rates, demonstrate warmer, more appropriate, and responsive interactions between staff and children and thus provide better experiences for children (Rosenthal and Vandell, 1996).

Unfortunately, most children in child care do not receive the high-quality care they need to support their health and development. Summaries of the findings of several important recent studies are presented below.

- The *Cost, Quality and Child Outcomes in Child Care* (CQO) study found that only 14 percent of child care centers in the study provided high-quality care, 74 percent provided mediocre services, and 12% were of poor quality (children's basic health and safety needs were only partially met in these settings). Of the 225 infant or toddler classrooms observed, only 8 percent scored in the developmentally appropriate range, while 40 percent scored in the poor range. The care provided was inadequate in 13 percent of regulated and 50 percent of non-regulated family home child care providers in this study (Helburn, 1995).

- The results of evaluations of care in family day care homes were not much better. The 1992 *Study of Children in Family Child Care and Relative Care* rated only 9 percent of homes as of good quality, 56 percent were judged as adequate or custodial, and 35 percent were rated as inadequate. The average family home care provider was observed to be non-responsive or inappropriate in child interactions nearly 50 percent of the time (Kontos et al., 1994).

- A 1991 study conducted by the U.S. Department of Education showed that average group size and staff-child ratios in child care centers generally meet the National Association for the Education of Young Children[3] (NAEYC) recommendations for preschool-age children, but fail to meet recommendations for infants and toddlers. Although most of the average group sizes and ratios found in the study are only slightly worse than the NAEYC recommendations, the fact that they represent averages indicates that many centers fall well below these levels (Love et al., 1996).

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[3] Developed in 1984 the NAEYC recommendations are criteria for child care accreditation. The recommendations are based on research and professional consensus. They include guidelines for staff-child interaction, curriculum content, parental involvement, staff qualifications and training, administration, staffing patterns (group size; staff-child ratios), physical environment, health and safety, and nutrition and food service (Helburn, 1996).

- A 1991 study conducted by the U.S. Department of Education showed that average group size and staff-child ratios in child care centers generally meet the National Association for the Education of Young Children[4] (NAEYC) recommendations for preschool-age children, but fail to meet recommendations for infants and toddlers. Although most of the average group sizes and ratios found in the study are only slightly worse than the NAEYC recommendations, the fact that they represent averages indicates that many centers fall well below these levels (Love et al., 1996).

These studies and others have also analyzed the effects of specific features of the child care setting, including staff education, staff turnover, and administrative oversight, on the quality of care provided to children. The results of these evaluations are summarized below.

- Staff education and training. Providers who have more formal education tend to interact more positively, offering responsive, sensitive and appropriate interactions with children (Helburn, 1996). As a group, child care staff today are better educated than staff were 20 years ago; more than 9 of 10 teachers in centers had received training related to young children (Hofferth, 1996). The CQO study indicates that 28 percent of caregivers have college degrees and 46 percent have had some college, while 26 percent have only a high school education or less (Helburn, 1995). On average, nearly half of all teachers in child care centers have a 4-year college degree or better, and an additional 13 percent have a two-year college degree. (Hofferth, 1996).

  Family home child care providers have relatively low levels of formal education. In the Family Child Care and Relative Care study, 36 percent of caregivers reported having a high school diploma or less, and 17 percent had college degrees, but relatively high levels of specialized training. Ninety-eight percent of family home providers have had some specialized training in child care (often through workshops or conferences and other non-formal education systems). The study did show a slight increase in levels of formal education among family day care providers; in 1976, the average family day care provider had a high school diploma, while in 1990 she or he had one year of college (Helburn, 1996).

- Stability is also directly related to quality of the child care experience. The 1993 National Child Care Staffing study shows an annual turnover rate among child care staff of 37 percent in 1992, a rate almost four times that reported in private-sector companies and more than double the annual rate reported by government, schools, and other non-profit employers. Stability also refers to the consistency of a child's placement; in 1990, the median length of child care arrangements was

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12 months. Informal arrangements (with relatives and friends) tend to be less stable than formal arrangements with regulated care. These findings suggest that children are regularly exposed to multiple settings and multiple providers within a setting, and the percentage of children who experience this instability has increased (Hofferth, 1996).

- Administrative oversight. The oversight of a child care program—that is, the type of agency administering the center—may also affect quality (Love et al., 1996; Helburn, 1996). In the CQO study, centers operated by for-profit chains reported more children per staff member than did private non-profit programs. The CQO study found that quality varied more within each of the nonprofit and for-profit sectors than between them. Within the for-profit sector, centers were generally homogeneous with respect to staff-child ratios and staff quality; considerably more variation was found within the not-for-profit sector. Church-affiliated centers have staff with lower levels of training and education, lower staff-child ratios, and lower overall quality than other nonprofit centers, even when all other factors affecting quality are held constant. Programs operated by public agencies, worksite centers, and freestanding centers with public funding tended to provide higher quality care. Profit status did not appear to contribute to quality of service as much as the extent to which the program receives significant sources of revenue other than parent fees (Kagan, 1995).

Evidence from several studies suggest that, overall, children from low-income and minority families are more likely to be enrolled in centers or family home child care programs that are lower in quality (Love, 1996; Helburn, 1995; Hofferth, 1996). Several researchers have found that low-income families often have fewer child care options, especially among families seeking child care for infants and toddlers and those who work odd hours (Frostin and Wissoker, 1994; Fuller and Liang, 1995). When group size and staff ratio are taken into account, the lowest- and highest-income families have been found to receive the highest-quality center-based child care. When the quality of staff-child interaction is taken into account, children from high-income families tend to receive higher-quality child care than all other groups (Hofferth, 1996).

C. Licensing Standards

Licensing and regulation are the processes through which the minimum standards of quality in child care are set. Licensing requirements reflect a community's consensus on the acceptable minimum standards necessary to protect children. States shoulder most of the responsibility for ensuring the basic health and safety of children in child care since States are responsible for licensing child care providers. States make the final decisions in setting basic standards,

determining which providers must meet the standards and enforcing set policies. The extent to which standards are set, which types of child care programs are mandated to comply, and how policies are enforced varies greatly among States (CDF, 1997).

Regulatory standards may be set in multiple domains including zoning, environmental health, building and fire safety, licensing and registration. Both regulatory and non-regulatory methods can serve to improve health and safety in child care. These methods fall primarily into three categories:

- Voluntary credentialing and accreditation of family home and center-based providers by a professional organization which sets professional standards based on research and professional consensus;
- Licensing of family home and center based child care providers by the State agency responsible for monitoring child care; and
- Registration or regulation of family home child care providers by the State licensing agency.

This section will review each of these methods of child care monitoring and regulation, including the types of providers targeted for each method and the proportion of providers who comply with the necessary standards.

The organizations that award credentials to caregivers and accredit model programs use their standards to promote and achieve high levels of quality in child care among both family home and center-based care providers. Examples of such organizations are the National Association for Family Child Care (NAFCC), the National Early Childhood Program Accreditation (NECPA), the National Accreditation Council for Early Childhood Professional Personnel and Programs (NACECPPP), and the NAEYC (Child Care Bulletin, 1995). Each of these professional organizations provides guidelines on maximum child-staff ratios and group sizes as well as staff qualifications and training, curriculum content, parental involvement, and physical environment. NEAYC recommendations also include guidelines for staff-child interaction, health and safety, nutrition and food service, and administration (Helburn, 1996).

Research shows that centers that meet the standards of such professional organizations tend to provide better quality services than non-credentialed or non-accredited centers (Helburn, 1996). Relatively few child care centers, however, meet these higher standards of accreditation. A 1996 review of current child care research revealed that more than one-third of child care centers studied failed to meet the NAEYC staff-child ratios, and one-third exceeded the recommended group size (Love et. al, 1996). In recent years States have also begun to acknowledge the link between accreditation and quality by offering incentives such as technical assistance and additional grants to providers who attain accreditation from national child care organizations. A few States, including Arkansas and Wisconsin, have implemented their own certification program for providers who meet standards above the general State licensing requirements, in an effort to raise the quality of child care provided (Ewen and Goldstein, 1996).

Most State licensing requirements include standards on child-staff ratios, staff training, and environment; however, other standards used by States vary widely. In general, State licensing standards are less stringent than professional organizations' accreditation standards, with few matching the widely recognized NAEYC recommendations (Love et al., 1996). States with stronger licensing requirements have a greater number of high-quality centers (Child Care Bureau, 1997). While most center-based providers are regulated at a minimum level, in some States, church-sponsored and State-funded programs may be exempt (Hofferth, 1996). States may also exercise the option to exempt centers that operate only part of the day or on a drop-in basis. Therefore, a significant number of children may be in the care of unlicenced providers despite strong Statewide standards for quality child care.

Regulation of family child care varies greatly as well. In many States, family home child care providers serving very few children are not required to be licensed. In some States, licensing is not required for homes serving as many as eight and twelve children (CDF, 1997). Most family child care providers, however, are subject to some type of registration process; providers serving very small numbers of children may be required to register with the State licensing agency and comply with a less stringent code of standards. In 1995, licensing officials in 27 States were required to visit these regulated sites less than once per year or not at all (Hofferth,

1996), while some States opt to exempt family home child care from any regulation. Overall, researchers estimated that most family child care homes are unregulated (Hofferth, 1996).

According to a 1994 study conducted by the U.S. Department of Education, children in lower-income households (less than $25,000), were less likely than middle class families to participate in center-based care, and only 45% of three- to five-year-olds whose family income was below the poverty level attended center-based care programs, compared to 75% of children from high income families (over $50,000) (Hofferth, 1996). Given that the proportion of children from low-income families enrolled in child care has increased in the last 15 years this data may indicate that many children from our most vulnerable families are not being cared for in licensed child care centers, but rather, they are being cared in less regulated child care settings, where the quality of care may not be monitored (Hofferth, 1996).

While regulations and guidelines play a significant role in maintaining healthy and safe child care settings (Koch, 1994), licensing and regulation is only as effective as the State agency's ability to establish, monitor, and carry out its regulatory functions. A national study conducted by the Office of Inspector General, (Dept of Health and Human Services, 1988) found that caseloads for licensing staff were almost twice as high as the recommended levels (Koch, 1994). A 1990 Children's Defense Fund Report indicates that many States lack resources to monitor and enforce requirements (Koch, 1994). States that do commit resources to monitoring and regulating child care are taking a significant step toward helping ensure a higher quality of care for children.

D. Health and Safety Standards

In addition to meeting basic licensure or registration standards, States may impose specific standards intended to improve the health and safety of child care settings. Several States have recently added more detailed child health and safety requirements in response to public health research on vaccinations, hand washing, sanitation, caring for children with special health care needs, and health training for staff (Kotch, 1994). Using funds from the Child Care and Development Fund and other sources, some States have also begun efforts to incorporate health issues in child care. Thirty-two State child care agencies coordinate with the State health

departments to promote partnerships between the child care community and health care communities, improve immunization rates, provide training to providers, monitor compliance with health and safety regulations, and improve the quality of child care programs (Child Care Bureau, 1998). For example:

- New Mexico funds a 45 hour training course for providers. The State also disseminates information on prevention of abuse and neglect and materials on health and safety in child care.

- Puerto Rico conducts joint projects with the health department on the need for immunization and other preventive care for children in child care.

- Twelve States currently promote basic health and safety training for child care providers covering topics such as nutrition, child CPR, and child abuse and neglect prevention. Iowa, for example, has earmarked funds to assist providers in meeting State training requirements for certification in CPR, child development, health and safety, and nutrition.

However, research shows that not all States specifically address the health and safety of child care settings in their regulatory systems. For example, a recent review by the Children's Defense Fund found that many States' health and safety standards for family day care homes may compromise children's safety (CDF, 1995). Highlights from this study include the following:

- Ten States do not require family day care providers serving fewer than six children to meet *any* health and safety regulations.

- Twenty-two States do not require family day care providers to have first aid training.

- Sixteen States do not require family day care providers to install smoke detectors and practice fire drills.

- Five States do not require all children enrolled in family-based child care to have the "most basic" vaccinations.

In addition, the CDF study found gaps in oversight of child care centers as well. For example, 18 States permit a single child care worker to supervise up to 5 six-month-old children in a child care center, and 25 States do not require child care centers to install proper surfacing under

playground climbing equipment (CDF, 1995). Other research has confirmed the lack of attention to health standards among child care centers, as summarized below.

- A study was conducted in 1990 to assess compliance by licensed child care centers with 16 guidelines pertaining to infectious disease and injury control. Researchers conducted telephone interviews with a nationally representative sample of over 2,000 child care center directors. Results revealed that compliance with these standards varied greatly by State, and by particular health and safety practices; however, it is important to note that compliance did not vary consistently by child care center characteristics, such as the number of children enrolled, the weekly fee, or ownership or for-profit status. In general, researchers found greater compliance with infectious disease control practices compared to injury control practices. Perhaps not surprisingly, providers complied more frequently with practices that could easily be "observed or validated" during on-site inspections, such as having written policies in place. Overall, researchers concluded that child care centers' practices related to infectious disease and injury "fell short" of the standards set forth in *Caring for Our Children* (Addiss et al., 1994).

- Runyan and colleagues analyzed the safety regulations of 45 States using 36 criteria. The study also included a self-administered questionnaire of day care regulators in 47 States concerning child care center regulations. In their review of safety regulations, researchers uncovered a number of gaps, including playground safety, firearms, and poisoning and choking hazards. Survey respondents reported that their States needed to improve training for licensing and enforcement staff. Issues concerning pets, electrical hazards, lead paint, and playground surfacing were also identified by respondents as needing increased attention (Runyan et al., 1991).

- Browning and colleagues also conducted a study to ascertain the extent of adherence to selected safety standards in child care centers in North Carolina. Using self-administered questionnaires, researchers determined that at least 80 percent of the centers surveyed adhered to the standards that were included in the State's child care regulations; however, fewer centers adhered to those standards that were not included in the State's regulations. The authors concluded that though the inclusion of the national standards in State child care regulations appears to reduce the existence of safety hazards in child care centers, it does not entirely eliminate them (Browning, et al., 1996).

The major barriers to increasing health and safety in child care that were identified in the research included the need for discretionary funding (Helburn, 1996), and the need of time for and access to training on health issues, particularly among family day care providers (Kendrick, 1994). The following chapters will address the Federal commitment to these concerns and

resources that are available to States and child care providers as they develop systems to coordinate health and child care.

IV. Model Approaches for Promoting the Coordination of Health and Child Care

Two major approaches have emerged to bolster child care providers' knowledge about health and safety issues and support their ability to provide high-quality care that enhances children's health and development. These are, first, providing direct training to child care workers on health and safety issues, and thus strengthening the internal capacity of child care centers and family day care homes to provide for the health of the children in their care; and, second, enlisting health care professionals as child care health consultants, who may provide education, consultation, and support to child care centers in their local areas. This chapter reviews the literature regarding these two approaches and provides examples of communities that have used each successfully.

A. Training Child Care Workers in Health and Safety Issues

High-quality, affordable, and convenient training opportunities can be critical to improving the quality of out-of-home child care. Health and safety training for child care providers usually includes information on preventing the transmission of disease, proper food preparation skills, first aid, and injury prevention. Some States have added training components on the identification and prevention of child abuse, nutrition, and child development (Bassoff and Willis, 1991).

The National Health and Safety Performance Standards call for child care directors and care givers to receive at least 30 hours of education during the first year of employment, 14 of which must be in health and safety. After the first year of employment, it is recommended that child care staff receive 24 hours of training each year, with eight hours dedicated to health and safety (*Caring for Our Children*, 1992). However, current licensing requirements are minimal in some States, with five States requiring no training and only 14 States requiring both pre-employment and continuing education training. Only a few States mandate more than ten hours of ongoing

training for child care workers. Training requirements for family child care providers are even less rigorous. Only 12 States mandate ongoing training and 24 States do not require *any* training (Shapiro Kendrick, 1994).

Child care programs' compliance with health standards and quality of care have been found to be positively correlated with staff training interventions:

- Kotch and colleagues designed and implemented an educational intervention in twenty-four child care centers in North Carolina. The intervention—a training program for child care providers—addressed the impact of hand-washing after diapering in the incidence of diarrhea. The study was successful in reducing the incidence of severe diarrhea (Kotch et al., 1994).

- Another study of 150 licensed child care centers in Florida conducted from 1992 to 1996 confirmed that children's cognitive development was enhanced when training was provided to caregivers (*Washington Post*, March 7, 1998).

Though training has been found to be associated with increased health and enhanced cognitive development of children in child care, the current training system for child care workers may not meet all child care providers' needs. A study conducted in 1991 revealed that many professionals believe that training in child care is "fragmented, random, scattershot, and not based on the needs of the field" (Shapiro Kendrick, 1994). A number of barriers prevent the full use of training programs available to child care workers. First, caregivers find it extremely difficult to attend training, as it often conflicts with their work schedules and family obligations, and it may be difficult to arrange for someone to care for the children while staff attend training sessions. When staff can find time to attend training and arrange for staff coverage in their absence, they sometimes find it challenging to identify relevant training opportunities in their community or nearby locations. This is especially problematic in rural areas (Bassoff and Willis, 1991). In addition, the cost of training is a significant problem (Bassoff and Willis, 1991).

In addition, child care workers have little incentive to attend trainings that are not tailored to their needs and educational styles. First, information may be presented in a form or at a level that frontline child care workers do not understand or find useful (Shapiro and Kendrick, 1994). Moreover, until recently, providers did not have the opportunity to receive continuing education credits that would help them advance their careers. This fact, coupled with the poor quality of

some training, further reduces the incentive for child care professionals to seek additional training.

Given these problems with the current training system, a few programs have been initiated in recent years to improve the quality and accessibility of the health and safety training for child care professionals:

- The Nevada Health Systems Development in Child Care CISS Project is developing a Statewide training curriculum for health and safety in child care. To meet the need of a mandate to increase training mandate for child care workers, CISS project officials and members of the Advisory Committee are taking a number of steps. First, they are conducting a needs assessment of child care programs across the State and creating an inventory of existing child care training resources. Through an inclusive process, project officials will set priorities for the unmet needs of providers with respect to health and safety training issues, and develop and distribute new training curriculum and videos for pre-service training.

- The State of Idaho received a grant from the American Public Health Association in 1992 to establish a training and technical assistance network for health issues in child care. The training program was developed and implemented through the State's seven public health districts, which conducted train-the-trainer sessions with district-level public health nurses. The nurses, in turn, provided training to parents and child care providers in their respective districts (Kathy Holly and Simonne deGlee, personal communication).

Another strategy for supporting the education of child care workers and health professionals is to create a centralized agency to answer their questions as they arise and to provide ongoing support. A few States have developed Statewide or regional resource centers that provide consultation and training to child care providers and health care professionals in their service area. Some examples are North Carolina, Pennsylvania, and Massachusetts which have adopted this approach to working toward integrating health and child care issues.

- Healthy Child Care North Carolina Campaign. North Carolina has an active "Healthy Child Care North Carolina" Campaign that involves over 35 child care, child health, education, and consumer agencies and organizations. The Campaign is based on the Healthy Child Care America's Blueprint for Action. One of the major goals of the campaign is to develop a Statewide network of child care health consultants. To this end, the campaign sponsors a variety of initiatives and projects, including the North Carolina Child Care Health and Safety Resource Center; training programs for child care health consultants,

pediatricians, and primary providers; and a resource library for child care health consultants and child care resource and referral agencies. The Campaign and its members work closely with the CISS project housed at the North Carolina Division of Maternal and Child Health and with the Governor's Smart Start Initiative which was begun in 1993 to help children enter school "ready to learn."

The North Carolina Resource Center, opened in November 1996, is one of the 10 associate centers of the National Resource Center for Health and Safety in Child Care (located in Denver, Colorado). The Resource Center offers telephone consultation, distributes information, provides referrals, and creates linkages between child care providers and child care health consultants. The center operates a nation-wide, toll free hotline for consumers on child care and child health issues (1-800-CHOOSE-1). Staff receive and respond to an average of 3,000 calls per month about a variety of topics, such as how to choose quality child care, common childhood illnesses, nutrition and food safety, and caring for sick children and children with special health care needs. In addition to fielding calls from parents and child care providers, the center also provides up-to-date information to child care health consultants. The Center also publishes a newsletter, titled "Good Beginnings Never End."

- Max Care: Maximizing the Health and Safety of Children in Out-of-Home Care. This CISS Health Systems Development in Child Care project, housed in the Massachusetts Department of Public Health in Boston, is focused on improving the health and safety of children and child care providers in child care facilities throughout Massachusetts. The Max Care program serves as a central point for training and technical assistance to child care providers on health issues. Among other project activities, Max Care established a Statewide telephone technical assistance phone line in October of 1996 called the Max Care Health Line. This 24-hour, toll-free service responded to 500 questions in its first year of operation, almost half of which came from family day care providers.

  In addition to the Max Care Health Line, this project has taken a number of steps to identify and work more closely with the health consultants providing technical assistance and support to child care centers. In particular, project officials surveyed all the child care centers in Massachusetts and asked them to identify their health consultant, whose contact information was then entered into a database. Subsequently, these health professionals were sent an issue of the project's first newsletter, which was the first time many of them had ever been identified as a "child care health consultant." According to project officials, this mailing generated a lot of enthusiasm and positive responses on the part of the health professionals. The project is now conducting a follow-up survey with the health professionals in the database in order to ascertain their training needs, as well as their preferred modes of communication. Massachusetts is one of the pilot States that has been selected to participate in the National Training Institute in North Carolina, and it is likely that this database and these initial contacts with current health care consultants will facilitate the training of consultants throughout the State.

Another focus of the project will be the development of collaborative partnerships among health and child care providers to identify and enroll children eligible for MassHealth, Massachusetts' Medicaid program for children (personal communication, Steve Shuman, March 1998).

- Early Childhood Education Linkage System (ECELS) Training Program. As mentioned in Chapter III, the Pennsylvania ECELS of the Pennsylvania Chapter of the American Academy of Pediatrics (AAP) carries out a number of activities related to training and technical assistance for child care providers, especially in the area of health and safety. ECELS, also known as *Healthy Child Care Pennsylvania,* produced a compendium of model policies that were gleaned from over 100 child care programs across the country. *Model Child Care Health Policies* is available on the Internet and can be downloaded by child care providers and then edited directly on disk to reflect the unique situation of each provider. The "fill-in-the blank" policies are relevant for both family day care settings, as well as larger facilities. The second and third editions of the compendium incorporate suggestions made by child care providers who adapted the model policies presented in the initial edition and shared them with ECELS. The third edition of the *Model Child Care Health Policies* is now available for sale through the NAEYC.

  In addition to the Model Policies initiative, the ECELS program administers a variety of activities. ECELS created exclusion and inclusion criteria for sick children that are cataloged in the guide "Preparing for Illness," completed a guide for reviewing children's immunization records called the "Immunization Dose Counter", and designed a software program to track children's receipt of immunizations and other health services called ECELSTRAK. The program also produced a set of videos that serve as a companion piece to the national health and safety standards and created a number of other curricula and print materials addressing health and safety issues in child care. ECELS currently publishes a quarterly newsletter for child care providers and health consultants, which is available on the Pennsylvania AAP website.

B. Child Care Health Consultants

The current and potential role for physicians and other health professionals in the child care community has been discussed in a number of circles. This model, which can take various forms, involves different types of health professionals, and encompasses a wide range of activities. Health professionals such as physicians, nurses, nutritionists, dentists, mental health and public health professionals have a lot to contribute as consultants to the child care community, because of their knowledge about children's health and safety. The particular activities that may be undertaken by health consultants for child care centers can be grouped

into three areas: health education, health promotion and disease prevention, and policy formation (Olsen et al., 1996).

- Education. Health professionals of various types could discuss with parents their children's day care arrangements and assist them in selecting quality child care programs. The professionals could also help parents of children with special health care needs to "identify and adapt" their child's day care arrangements to their needs and those of their child (Committee on Early Childhood, Adoption, and Dependent Care, 1993). Working with child care providers, health professionals could serve as educators on a wide variety of issues including communicable diseases, safety, nutrition, and immunization.

- Health Promotion and Disease Prevention. Health professionals could assist child care programs to mount health prevention efforts, track immunization coverage of the children in attendance, conduct screening activities, and monitor disease outbreaks (Olsen, 1996).

- Policy. It has also been suggested that health professionals could actively support and promote the State's licensing requirements for health and safety, particularly immunization (Committee on Early Childhood, Adoption, and Dependent Care, 1993). Others have proposed that physicians, in particular, should become involved in drafting exclusion policies for sick children, administering medicines, and writing policies and procedures for controlling disease outbreaks (Olsen, 1996).

Each of these areas is involved to some degree in the child care health consultant model for integrated health and child care. Below are four different examples of child care health consultant programs currently in place.

- NAPNAP Adopt-a-Center Effort. The National Association of Pediatric Nurse Associates and Practitioners' (NAPNAP) Child Care Special Interest Group (CCSIG) is working with the AAP and the National Association of Child Care Resource and Referral Agencies (NACCRRA) as part of the Healthy Child Care America Campaign to encourage health professionals to work with child care providers (center-based and family day care providers) and Head Start programs on issues related to health and safety. Called the "Adopt a Child Care Program", this initiative was launched in March 1997. NAPNAP and the AAP are encouraging its members to "adopt" one child care provider. Providers are being encouraged to commit to any of a range of activities, such as:

  - Providing telephone technical assistance;

  - Linking families with children in day care to primary health care services;

- Developing health promotion and injury prevention programs for staff and parents;
- Administering immunizations in underserved areas;
- Assisting families with children with special health care needs to access specialty services;
- Conducting onsite health consultations and assessments of health and safety risks;
- Assisting in the development of an action plan to mitigate any health or safety hazards that are discovered during a site visit; and
- Conducting trainings for care givers and parents on any number of health-related issues (Ulione and Crowley, September 1997).

Efforts are currently under way to match child care providers that have requested a health consultant with health professionals who have volunteered to act in this capacity.

- Healthy Child Care Alabama. This project is an example of a local effort with the same goal as the national Adopt-a-Center Initiative. The Alabama child care CISS grantee, housed at the Alabama Department of Public Health's Bureau of Family Health Services, is implementing a pilot nurse health consultant program in Marengo and Sumter Counties. The goals of this project are to:
  - Reduce injury and illness in child care;
  - Increase the health and safety awareness of licensed and subsidized child care providers;
  - Provide a health support network for the child care community; and
  - Work with the child care resource and referral agencies to provide training on health and safety issues (personal communication, Carolyn Bern, March 18, 1998).

  The project has hired one nurse consultant to work with child care providers in these two rural counties. Using a number of health and safety indicators, the nurse provides on-site consultation and assessment of health risks in the child care setting. The nurse also acts as a contact for the child care resource and referral agencies and child care providers on health, nutrition, and safety issues. In addition, the consultant reviews the immunization records of the children in child care.

It is hoped that this pilot program, initiated in March 1998, will provide more information about the health and safety practices of child care providers in these counties, identify the training needs of providers, adapt the child care health consultant model to the specific situations of these locales, and develop a marketing strategy for enlisting the support of pediatricians and other civic and community representatives in improving the health and safety in child care programs in Alabama (personnel communication, Carolyn Bern, March 1998).

- The Growing Child. A group of pediatricians based in Raleigh, North Carolina owns and operates a physician network of six child care centers and are currently building an additional four sites. Called "The Growing Child," these centers have the benefit of having these owner-physicians intimately involved in their administration. Acting as child care health consultants, these physicians provide guidance and training to child care staff. Specifically, they aim to improve the health and safety aspects of the centers by focusing on a wide range of issues including infectious disease prevention and management, working to keep mildly ill children in the centers instead of sending children home, diminishing the use of antibiotics and medications in the centers, and providing staff training on first-response skills in the case of emergencies. (personal communication, Dr. Jim Poole, 1998).

- Links for Families. Links for Families is a CISS Community Organization Grant (COG) based in the Boston Medical Center that seeks to replicate the Healthy Child Care America Campaign in the city of Boston. Links for Families is a collaborative project of Boston Medical Center, ABCD Head Start, and the HealthNet Health Centers to link health, education, and child care systems to improve the health of children and their families in Boston. The project's interagency working group facilitates collaboration and addresses issues related to the provision of training and networking sessions for staff on issues in child health and development.

  This CISS project is creating a reliable resource for health and safety information for family child care providers. While Massachusetts requires child care centers to have health consultants, family child care providers do not have an organized system of health consultation. With 11,000 family day care providers Statewide and 800 in the city of Boston alone, there is a great need for this assistance.

  The Healthy Child Care Boston initiative has arranged for pediatricians and nurse practitioners to deliver brief presentations to groups of family day care providers, and to field their questions after each presentation. By March 1998, 16 of these training sessions had been arranged in the Boston area and 3 had already been conducted. The health care providers that conduct the training sessions work at a number of health centers that are affiliated with Boston Medical Center. It is hoped that this collaborative effort between the city's health centers and family day care providers will eventually be extended to other areas of the State (Steve Shuman, personal communication, March 1998).

Though some health professionals are currently acting as child care health consultants, there are many more who are not involved in child care issues. In order to enable and facilitate the involvement of health professionals in the realm of child care, they must first be oriented and educated about the relevant issues. Studies conducted with health care professionals underscore the need to educate physicians, in particular about the topic of child care, and how they can help families make informed choices about their child care arrangements.

- Wirth and Hausman surveyed primary care physicians in Delaware, the District of Columbia, Maryland, New Jersey, Pennsylvania, and West Virginia concerning their attitudes and knowledge of child care. The 25-item questionnaire covered topics such as level of comfort in discussing child care with patients, experience in working with child care centers in a consulting capacity, and opinions concerning minimum quality standards. When asked where they preferred to place children who are in need of child care (assuming no financial constraints), respondents indicated that they preferred that infants be cared for by a relative or nonrelative in their home, and that older children to be cared for in child care centers. Eighty-five percent of respondents believed they were not adequately trained in child care issues during their residency; however, younger physicians were more like to say they had received enough training. More than one third of physicians reported that they did not feel "comfortable in advising parents on what [child care] arrangements are available in their practice area" and approximately one third said they rarely or never discuss child care with parents during routine office visits. Pediatricians were more comfortable than family practitioners in advising their patients on child care arrangements, were more likely to discuss child care during initial and routine office visits, and more accurately estimated the percentage of their patients using child care. Very few (9%) respondents had acted in an advisory capacity to a child care facility. Nearly three-quarters of respondents did, however, believe that the Federal government should "set minimum standards to improve child care quality and availability" (Wirth and Hausman, 1993).

Though this study focused specifically on physicians, it is not unreasonable to assume that nurses, and other health professionals, such as nutritionists, physical therapists, and dentists, could benefit from information and training with respect to child care, child development, and child health and safety issues. The National Training Institute for Child Care Health Consultants was initiated to meet this need.

The Department of Maternal and Child Health at the University of North Carolina's School of Public Health, in partnership with the Frank Porter Graham Child Development center, has a three-year cooperative agreement with the Federal Maternal and Child Health Bureau to

develop and implement a State-of-the-art, standardized, national program to train public and private sector health and child development professionals to serve as health consultants to child care programs. The primary goal of the National Training Institute is to support the healthy and safe development of young children in out-of-home care. The Institute is collaborating with numerous child health and child care organizations, including the American Academy of Pediatrics, the National Association for the Education of Young Children, and the Association of Maternal and Child Health Programs to deliver to child care health consultant training program to State and local health and child care professionals nationwide (Deborah Hollis, personal communication).

Participating States will be asked to convene multi-disciplinary teams to attend a training session sponsored by the Institute, the format of which has yet to be decided. These professionals would, in turn, train other health and child development professionals in their States to serve as health consultants. A pilot training will be held during the summer of 1998 with regular training workshops scheduled to begin in January 1999. A total of ten training sessions with representatives from ten States are planned during the years of 1999 and 2000.

V. Resources to Promote Coordination of Health and Child Care

The previous chapters described the tremendous need among child care providers for information and support in enhancing the health-related aspects of their services. Although various approaches, such as comprehensive training and the use of health consultants, exist to address these issues, communities need technical and financial support to take advantage of these ideas. Under various auspices, the Federal government is providing financial support, technical assistance, and leadership in improving the quality of out-of-home child care and promoting coordination of health and child care systems. This chapter reviews these Federal efforts as well as public- and private-sector resources available to support this coordination.

A. Federal Efforts to Promote Health in Child Care

Promoting coordination between health care and child care and improving the quality of child care for the millions of children in child care arrangements is a priority of the Federal government. In particular, the DHHS—through the Child Care Bureau in the Administration on Children, Youth, and Families, and the Maternal and Child Health Bureau (MCHB) in the Health Resources and Services Administration—has played a leadership role in this arena. Important contributions have also been made by other Federal agencies, and the White House has placed child care high on the national agenda. This section highlights a range of initiatives by various branches of the Federal government to help improve the availability of safe and affordable child care services for America's families.

1. Department of Health and Human Services

As indicated above, the two lead agencies in DHHS on child care issues are the Child Care Bureau (CCB) and the MCHB. CCB was established in January 1995 through the consolidation of four existing child care programs as a means for providing a focal point for child care at the Federal level. The CCB administers Federal funds to States, territories, and tribes (through the Child Care and Development Fund, discussed in Section III) to assist low-income families in accessing child care services and spearheads efforts to make quality child care available to all families. The MCHB, in existence for more than 80 years, began making health and safety in child care a funding priority in the mid-1980s.

The CCB and MCHB have worked both collaboratively and independently of each other to promote the health and safety of children in child care, as described below.

a. Healthy Child Care America Campaign and the Blueprint for Action

The Healthy Child Care America Campaign, a joint project of the MCHB and CCB, is aimed at stimulating and reinforcing collaborative efforts between the public health and early childhood communities to create the highest quality child care. The Campaign was officially launched in May 1995 at the National Child Care Health Forum, a conference planned jointly by the MCHB

and CCB to facilitate linkages between health and child care providers and to promote the healthy development of children in child care.

During the National Child Care Health Forum, a central piece of the Healthy Child Care America Campaign—the *Blueprint for Action*—was presented and comments from participants—experts in the area of health and safety in child care—were solicited. Based on these suggestions, the document was revised and has since been disseminated to communities across the nation. The *Blueprint for Action*, which is intended to serve as a working document for communities interested in promoting safe and healthy child care, lays out ten action steps, each accompanied by suggested strategies for implementation, examples of communities that have made progress in that area, and resources. The list of action steps is presented below:

- Promote safe, healthy, and developmentally-appropriate environments for all children in child care;
- Increase immunization rates and preventive services for children in child care settings;
- Assist families in accessing key public and private health and social service programs;
- Promote and increase comprehensive access to health screenings;
- Conduct health and safety education and promotion programs for children, families, and child care providers;
- Strengthen and improve nutrition services in child care;
- Provide training and ongoing consultation to child care providers and families in the areas of social and emotional health;
- Expand and provide ongoing support to child care providers and families caring for children with special health needs;
- Use child care health consultants to help develop and maintain healthy child care; and
- Assess and promote the health, training, and work environment of child care providers.

The *Blueprint for Action* is intended for use by child care providers, health care providers, child care regulators, families, policymakers, businesses, child care resource and referral agencies, the public health community, and anyone striving to improve the health and safety of children in child care.

b. Health and Safety Standards for Out-of-home Child Care

In 1987, the MCHB funded a major project by the American Public Health Association and the American Academy of Pediatrics to develop national health and safety performance standards in out-of-home child care facilities. These standards, which were completed in 1992 and published under the title *Caring for Our Children* (also published under the title *National Health and Safety Performance Standards Guidelines for Out-Of-Home Child Care Programs*) address such issues as staffing; facilities, supplies, equipment and transportation; programs and activities; nutrition and food service; prevention and control of infectious diseases; care of children with special health care needs; administration; and licensure and regulation. This 400+ page volume contains 981 standards, as well as the rationale for the standards and suggested strategies for their implementation.

A clear strength of *Caring for Children* is the comprehensive nature of the national standards for health and safety in child care programs presented in the volume. However, the inclusion of nearly a thousand standards in this document presents significant challenges to the child care community for using the standards for planning regulatory change or doing regulatory analysis. For this reason, a process was begun in 1994 to set priorities among the standards. A modified Delphi approach was the research methodology employed to accomplish the task of deciding which of the 981 standards are most needed for the prevention of injury, morbidity, and mortality in child care settings. The result of this process was the publication of *Stepping Stones to Using Caring for Our Children*, which includes the 182 standards identified as being of highest priority. Both *Caring for Children* and *Stepping Stones* are available on the world wide web through the MCHB-supported National Resource Center for Health and Safety in Child Care located at the University of Colorado (http://nrc.uchsc.edu).

c. Health Systems Development in Child Care Grants

Another important initiative by the MCHB in the child care arena is the Health Systems Development in Child Care (HSDCC) grants encompassed within its CISS Initiative. The HSDCC grants aim to use the child care environment as a focal point for State and community planning to integrate health care, child care, and social support services in programs serving children and families. The primary objective of the grants is to facilitate the development and maintenance of systems of care that ensure the health and safety of children in out-of-home child care settings and promote children's access to ongoing health care. In 1997, 49 States had HSDCC grants to facilitate the accomplishment of these goals.

d. CCB-Funded Technical Assistance

The CCB also funds a network of contractors to provide technical assistance in different arenas to support the development of high-quality child care systems. The six CCB-funded contractors include:

- The American Academy of Pediatrics, which is assisting States with implementing the *Healthy Child Care America* campaign;
- The Finance Project, which is focusing on fostering the development of public-private partnerships around the development of child care systems;
- Ellsworth Associates, which offers TA around the development of Federal and State child care information systems;
- Native American Management Services, which provides support to tribes that receive funds from the Child Care and Development Fund;
- Trans-Management Systems Corporation, which offers TA to States and territories receiving CCDF funds; and
- United Cerebral Palsy Association, which is assisting States in facilitating access to child care for children with special health care needs through its *Map to Inclusive Child Care Project* (described in Chapter II).

2. Child Care Health Promotion Efforts by Other Federal Agencies

Under the Clinton Administration, both the Department of Justice (DOJ) and the USDA have also played an important role in addressing child care issues. The DOJ has focused on child

care for children with disabilities, and the USDA on child care for families in rural areas, as described below.

The DOJ has spearheaded agreements with the two largest private-sector child care providers in the country—KinderCare and La Petite Academy—to conduct finger-prick tests as requested by doctors and parents for children with diabetes. In addition, KinderCare has agreed to develop a model policy to enable children with mental retardation to attend its centers with a State-funded personal care attendant. In addition to doing the finger-prick tests, La Petite Academy has agreed to modify some of its programs to facilitate the participation of children with cerebral palsy, and also to keep epinephrine on hand for severe and possibly life-threatening allergy attacks. These developments are helping to pave the way for more inclusive child care for children with special health care needs.

To help meet the need for child care in rural America, the Department of Agriculture's Rural Housing Service's Community Facilities program created 31 child care centers during FY 1997 and is continuing to expand its reach during FY 1998.

3. White House Initiatives to Improve Child Care

In recent months, the White House has been focused on raising the issue of child care as a national priority. On 23 October 1997, President Bill Clinton and First Lady Hillary Rodham Clinton hosted the White House Conference on Child Care, a day-long conference to focus national attention on issues critical to meeting the child care needs of children and families. The conference focused on the challenge of making child care available and affordable and ensuring its safety and quality. During this conference, the President proposed several new initiatives to strengthen the child care system. These included:

- A new scholarship fund for child care providers to be established to enhance the training and compensation of child care workers;
- Background checks on child care providers that can be made easier and more effective by eliminating State barriers to sharing criminal histories for this specific purpose; and

- A working group on child care made up primarily of business leaders working with labor and community representatives to be established to identify strategies more businesses to provide child care or help their employees afford high-quality child care.

President Clinton also promoted community service as an important resource for strengthening and expanding access to after-school programs and announced that the Corporation for National Service, through its Learn and Grow Initiative, has developed a how-to manual for groups wanting to incorporate community service into after-school programs.

In early 1998, President Clinton presented a $21.7 billion initiative in subsidies, to be spread out over five years, aimed at improving child care and offsetting the financial burden of child care on working families. The President's ambitious plan includes nine separate components, outlined below:

- Double the number of children receiving Federal child care subsidies by increasing block grants to States ($7.5 billion);
- Increase tax credits for 3 million working families earning under $60,000 to help them pay for care for children under 13 or disabled dependents ($5.2 billion);
- Increase Head Start funding and double the number of children served ($3.8 billion);
- Establish a fund to provide grants for community programs to improve child care safety and learning for children through age five ($3 billion);
- Expand funding of school-community partnerships to provide after-school care ($800 million);
- Give tax credits to businesses that provide child care for employees ($500 million);
- Fund State efforts to enforce child care health and safety standards ($500 million);
- Provide 50,000 scholarships a year to students working toward child care credentials ($250 million); and
- Fund child care research and a consumer hot line ($150 million).

This initiative would substantially increase the resources available to support child care centers and family day care homes, potentially providing support for efforts to improve health and safety in these settings, primarily through the health and safety enforcement provisions but also through training and research allocations. In addition to the White House, Congress has paid a great deal of attention to child care issues in recent months. As of mid-February 1998, nearly 40 bills related to child care had been introduced in the House and Senate during the first session of Congress, several of which include funding for improving the quality of child care and providing training to caregivers.

B. Resources to Support Coordination of Health and Child Care

Several sources of funding and other resources are available to States and communities as they develop strategies to coordinate health care and child care. The Federal government is by far the largest supplier of resources for these activities, through the MCH Block Grant, the Child Care and Development Fund, the Title XX/Social Services Block Grant ($500 million of which is currently used for child care), and several federally funded information centers. In addition, a number of State, local, and privately funded resources are available. This chapter describes many of these resources; a further list of organizations involved in improving the quality of child care is provided in the Appendix.

1. Child Care Development Fund (CCDF)

In 1990, the Child Care and Development Block Grant (CCDBG) was enacted in response to the widespread need for child care among working families. During its existence, the majority of block grant funds were used to help families pay for child care. In addition, five percent of the lock grant was specifically set aside for quality improvement initiatives. Several States took advantage of this set-aside to improve the quality of child care through a variety of activities, including professional development activities, the enhancement of child care resource and referral agencies, consumer education and family support, support for licensing and monitoring activities, development of family child care networks, State certification of quality programs, and training.

In 1996, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) changed Federal child care assistance programs by eliminating Federal child care entitlements and consolidating the major sources of Federal child care subsidies for low-income children, including the CCDBG, into a single block grant to States—the CCDF. Federal funding for the CCDF in 1997 was $2.97 billion, a 27 percent increase over previous funding of child care assistance for low-income families (Long and Clark, 1997). Of these funds, 4 percent are to be set aside for quality improvement activities. A March 1998 publication by the National Child Care Information Center, titled *Child Care Development Block Grant: Report of State Plans*, provides an overview of States' proposed efforts to address the quality of child care as outlined in their State plans for fiscal year (FY) 1998 through FY 1999. Many of these efforts focus on improving the quality of child care by promoting health and safety through consumer education, monitoring compliance with licensing and regulatory requirements, and training and technical assistance. Below are examples of activities outlined in State plans in each of these areas:

- Consumer Education. Under the Child Care Development Fund, Alaska distributes educational materials to families and providers on various topics including health and safety. Minnesota focuses on educating parents and providers about early brain development. To strengthen the connection between child care and health care, various State agencies in North Carolina have created a toll-free hotline that provides information on health and safety, regulatory, and other child care issues.

- Monitoring Compliance with Licensing and Regulatory Requirements. Mississippi is creating a system to educate and recruit parents as monitors of minimum health and safety requirements of child care facilities, including family child care homes. In New Mexico, reimbursement is made to food program-sponsoring agencies for registration of family child care providers and for health and safety inspection when providers do not participate in the food program.

- Training and Technical Assistance. Massachusetts offers training in health and safety and child abuse and neglect through its resource and referral agencies. In West Virginia, training focuses on health and safety issues, accessibility, classroom management, and caring for children with special health care needs.

2. MCH Block Grant

The Omnibus Budget Reconciliation Act of 1989 (OBRA '89) required States to use their MCH Block Grant to "promote development of Statewide networks of comprehensive community-based systems of services that can ensure family-centered, culturally competent, coordinated

care for all children and their families." Several State maternal and child health agencies devote a portion of their block grants to coordinating health and child care. The following examples illustrate how States have used the block grant to this end (AMCHP, 1997).

- Healthy Child Care Iowa. This project is designed to establish a relationship between child health and child care systems. The goals of the project are to: 1) link child health and child care programs and services in the context of the family support service system, 2) facilitate the linkage of child health and child care systems through model multidisciplinary collaboration, and 3) sustain the linkage of child health and child care by engaging both the public and private sectors in multidisciplinary interagency collaboration.

- Pennsylvania Early Childhood Education Linkage System (ECELS). The Pennsylvania Department of Health collaborates with the Pennsylvania Chapter of the American Academy of Pediatrics in a public-private partnership to provide technical assistance and consultation on preventive health and safety issues for children in child care settings. Specifically, ECELS provides training to community health nurses, school nurses, pediatricians, providers with specialized expertise in working with children with special health care needs, and health educators who act as consultants to child care centers; maintains a toll-free hotline and lending library of audio-visual materials for consultants and day care providers; and publishes and distributes 12,000 copies of a quarterly newsletter.

- Rhode Island Early Intervention in Child Care Settings (EICCS) Program. EICCS supports collaboration of community-based programs with a designated lead agency, and provides services to child care centers serving children from low-income families. The objectives of the EICCS program are: 1) to increase the capacity of child care programs to serve children with special health care needs, 2) to train child care staff in the early identification of child care staff in the early identification of children with social or health problems, and 3) to connect the child and family with services in the community.

3. National Resource Center for Health and Safety in Child Care

The National Resource Center for Health and Safety in Child Care (NRC) is an MCHB-funded information center located at the University of Colorado Health Sciences Center in Denver. The NRC's primary mission is to promote health and safety in out-of-home child care settings throughout the nation. The NRC serves as a resource to States by:

- Disseminating up-to-date information for improving child care;

- Providing technical assistance in forming partnerships and improving intrastate communication systems;
- Assisting State-level networks to develop strategies for policy development that values high quality child care; and
- Facilitating networking opportunities with groups such as CISS grantees.

The NRC also supports a network of State-level Associate Centers. These centers, which are networks of State agencies and private organizations, are designed to provide leadership in promoting system change for the improvement of child care delivery in the States where they are located. The Associate Centers and the NRC maintain communication regarding their organizational structure, share information about successful programs and resources, and report evidence of improving child care systems. Potential collaborative projects between NRC and the Associate Centers include:

- Comparing State licensing regulations with national standards, particularly those included in *Stepping Stones to Using Caring for Our Children*;
- Maintaining a database of child health consultants in each State;
- Developing strategies to increase parent education about quality child care;
- Identifying health and safety indicators in child care;
- Promoting public-private linkages; and
- Educating physicians and other health providers about quality child care.

In 1997, five Associate Centers were established; five more will be added in 1998.

4. State and Local Resources

Although the Federal government is considered the major source of public funding for child care, many States and communities devote their own revenues to child care initiatives, some of which are dedicated to improving the quality and supply of child care (Mitchell et al., 1997). Below are examples of State and local initiatives to ensure health and safety in child care. For example, New York State awards Child Care Center and Family Child Care Start-up and Health

and Safety Grants to child care centers and family-based child care providers to help them ensure the health and safety of children in their care. Grants can reach up to $500 for family providers and up to $100,000 for child care centers. State funds are administered by the New York State Department of Social Services and the Empire State Development Corporation. More than 20 other States have established similar grants programs, some of which are administered through a community development corporation or a community development financial institution.

5. Private Sector Resources

Given the growing nationwide focus on child care issues, it is likely that private foundations and other grantmaking institutions will play an increasingly important role in funding programs designed to improve the quality of child care. Several federally funded technical assistance providers have begun to compile information on private-sector funding opportunities that are becoming available to State and community-based organizations. These include:

- National Resource Center for Health and Safety in Child Care. The NRC in Denver makes an effort to keep abreast of the various charitable organizations that have given money to child care-related projects and the recipients of these funds. One of the ways the NRC tracks this information is by subscribing to *Youth Today*, which publishes lists of grantors and grantees and is available via Handsnet. More information on *Youth Today* can be obtained by calling 202-785-0764.

- American Academy of Pediatrics (AAP). AAP has recently made providing information on sources for funding one of its technical assistance components and has begun compiling and distributing a comprehensive list of potential funding opportunities for child health initiatives, including child care-related projects. AAP has also compiled materials on fundraising tips and strategies. This information can be obtained through AAP's Healthy Child Care America Campaign.

- Children and Youth Funding Report. This is a semimonthly report on government and private grants, which may be purchased as a single issue or through yearly subscriptions. This newsletter also includes brief articles on legislative and other Federal initiatives on issues related to children. (More information is available from CD Publications at 301-588-6382.)

Through these resources, the Federal government as well as private-sector funders are working to enhance the coordination of health and child care and to make the time spent in child care a healthy, developmentally stimulating period in our children's lives.

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Appendix: Resources to Support Coordination of Health and Safety in Child Care

Child Care Action Campaign (CCAC)
330 7th Avenue, 17th Floor
New York, NY 10001
Phone: (212) 239-0138
Web: http://www.usakids.org/sites/ccac.html

CCAC is a national advocacy organization that works to stimulate and support the development of policies and programs that increase the availability of quality affordable child care. Current programs include: Child Care and Education: Forging the Link; the Family Support Watch (to monitor and strengthen the child care provisions of welfare reform); and the Strategic Communications Plan for Early Care & Education.

Children's Defense Fund (CDF)
25 E Street, NW
Washington, DC 20001
Phone: (202) 628-8787
Web: http://www.childrensdefense.org

The CDF is a non-profit research and advocacy organization that exists to provide a strong and effective voice for children of America who cannot vote, lobby or speak out for themselves. The Children's Defense Fund pays particular attention to the needs of poor, minority, and disabled children. The CDF's goal is to educate the nation about the needs of children and encourage preventing investment in children before they get sick, drop out of school, suffer damage breakdown, or get into trouble.

The Children's Foundation
725 15th Street, NW, #505
Washington, D.C. 20005
Phone: (202) 347-3300

The Children's Foundation is a private national educational non-profit organization that strives to improve the lives of children and those who care for them. Through the National Child Care Advocacy Project and National Child Support Project, the Children's Foundation conducts research and provides information and training on Federal food programs, quality child care, leadership development, health care, and enforcement of court-ordered child support.

Child Welfare League of America, Inc. (CWLA)
440 First Street, NW
Suite 310
Washington, D.C. 20001-2085
Phone:(202) 638-2952
Web: http://www.cwla.org/

CWLA is a federation of over 750 public and voluntary member agencies that serve children and families throughout the United States and Canada. These agencies provide a full array of child welfare services including child care. CWLA's services include developing standards in 12 service areas including child care.

Center for Career Development in Early Care and Education
Wheelock College
200 The Riverway
Boston, MA 02215
Phone: (617) 734-5200
Web: http://ericps.crc.uiuc.edu/ccdece/ccdece.html

The Center for Career Development in Early Care and Education strives to improve the quality of care and education for young children by creating viable career development systems for practitioners. The multi-faceted activities of The Center are designed to help States and localities bring about systemic change to replace the fragmented system of training that now exists. The Center is the vehicle through which Wheelock, in partnership with other national organizations and government policymakers, stimulates and further develops the concept of a dynamic career development system.

Council of Chief State School Officers (CCSSO)
One Massachusetts Avenue, NW #700
Washington, DC 20001-1431
Phone: (202) 336-7033
Web: http://www.ccsso.org

The CCSSO is a nationwide, non-profit organization composed of officials who head the departments of elementary and secondary education in the States, U.S. extra-State jurisdictions, the District of Columbia and the Department of Defense Dependents Schools. The Council's members develop policy and consensus on major education issues, which the Council advocates before the President, Federal agencies, the Congress, professional and civic associations and the public. With the support of foundations and Federal agencies, the Council undertakes projects that assist States with new policy and administrative initiatives and assist the Federal agencies and foundations in implementing their programs. During the past eight years, the Council has adopted major policy Statements around the theme “Education Success for All.”

CCSSO is currently engaged in a number of national and international efforts in the areas of early childhood care and education, science and math, community service learning, connecting schools to employment, HIV and school health programs, Title I of the Improving America's Schools Act (IASA) and high-poverty schools, collaboration and integrated social and health services in schools, bilingual education, middle grade school improvement, migrant education, education and technology, State and local education leadership and school improvement, large-scale assessment, curriculum and instructional improvement, student and teacher assessment, education data and information systems, standards, and family involvement in children's learning.

Ecumenical Child Care Network
8765 West Higgins Road, Suite 405
Chicago, IL 60631
Phone: (312) 693-4040

The Ecumenical Child Care Network is a national, interdenominational membership organization whose members advocate for high quality, equitable, and affordable child care and education in churches and other religious organizations. As Christians, the Ecumenical Child Care Network challenges members to apply anti-bias/anti-racist principles in their work and in all that they do.

Educational Resources Information Center's Clearinghouse on Elementary and Early Childhood Education (ERIC/EECE)
University of Illinois at Urbana-Champaign
Children's Research Center
51 Gerty Drive
Champaign, IL 61820-7469
Phone: (800) 583-4135 or (217) 333-1386
Web: http://ericps.crc.uiuc.edu/ericeece.html

The ERIC/EECE collects and disseminates research, literature, fact sheets and briefing papers on the physical, cognitive, social, educational and cultural development from birth through early adolescence. Included in the collection is information on prenatal development, parenting and family relationships, learning theory research and practice, teaching and learning and theoretical and philosophical issues pertaining to children's development and education.

Families and Work Institute
330 Seventh Avenue, 14th Floor
New York, NY 10001
Phone: (212) 465-2044
Web: http://www.familiesandw orkinst.org

The Families and Work Institute is a non-profit research and planning organization committed to developing new approaches for balancing the changing needs of America's families with the continuing need for workplace productivity. The Institute conducts policy research on a broad range of issues related to the changing demographics of the workforce and operates a national clearinghouse on work and family life. It serves decision-makers from all sectors of society business, education, community, and government. The Families and Work Institute was founded in 1989 by Dana Friedman and Ellen Galinsky. Located in New York City, the Institute carries out its work with a core staff of in-house researchers and leading experts throughout the country.

National Association for the Education of Young Children (NAEYC)
1509 16th Street, NW
Washington, D.C. 20036
Phone: (800) 424-2460 or (202) 232-8777
Web: http://www.naeyc.org/naeyc/

NAEYC is a nonprofit professional organization of more than 90,000 members dedicated to improving the quality of care and education provided to our nation's young children. The Association administers the National Academy of Early Childhood Programs, a voluntary, national, accreditation system for high-quality early childhood programs, and the National Institute for Early Childhood Professional Development, which provides resources and services to improve professional preparation and development of early childhood educators and fosters development of a comprehensive, articulated system of high-quality professional development opportunities. In addition to the bimonthly journal *Young Children*, NAEYC also publishes an extensive array of books, brochures, videotapes, and posters.

NAEYC's primary goals of improving the professional practice of early childhood education and building public understanding and support for high quality early childhood programs are shared and implemented by a national network of more than 450 Affiliate Groups. For 25 years NAEYC has sponsored the Week of the Young Child to focus public attention on the rights and needs of young children.

National Association for Family Child Care (NAFCC)
206 6th Avenue, Suite 900
Des Moines, IA 50309-4018
Phone: (515) 282-8192 or (800) 359-3817
Fax: (515) 282-9117
Web: http://www.nafcc.org/
E-mail: nafcc@assoc-mgmt.com

NAFCC is the national membership organization working with the more than 400 State and local family child care provider associations in the United States. The focus of NAFCC is to promote quality family child care through accreditation and to promote training and leadership development through specialized technical assistance.

National Association of Child Care Professionals (NACCP)
304-A Roanoke Street
Christiansburg, VA 24063
Phone: (800) 537-1118
Fax: (540) 382-6529
E-mail: admin@naccp.org

NACCP is committed to strengthening the professional skill level of child care directors, owners, and administrators nationwide, without regard to tax status or corporate structure. NACCP believes effective management is the critical link to superior child care.

National Association of Child Care Resource and Referral Agencies (NACCRRA)
1319 F Street, NW, Suite 810
Washington, D.C. 20004-1106
Phone: (202) 393-5501
Web: http://www.childcarerr.org

NACCRRA is a national membership organization of over 400 community child care resource and referral agencies (CCR&Rs) in all 50 States. NACCRRA's mission is to promote the growth and development of high quality resource and referral services and to exercise leadership to build a diverse, high quality child care system with parental choice and equal access for all families. The CCR&Rs it represents are the only portion of the child care delivery system that maintains daily contact with both parents and child care providers in hundreds of local communities. CCR&Rs work closely with a broad array of community leaders, including employers and unions. Increasingly, NACCRRA and its members offer innovative guidance to policy makers on service delivery and regulatory issues and strategies.

National Black Child Development Institute (NBCDI)
1023 16th Street, NW, Suite 600
Washington, D.C. 20005
Phone: (202) 387-1281
Web: http://www.nbcdi.org

NBCDI serves as a critical resource for improving the quality of life of African American children, youth, and families through direct services, public education programs, leadership training, and research.

National Center for Children in Poverty
Columbia University School of Public Health
154 Haven Avenue
New York, NY 10032
Phone: (212) 304-7100
Web: http://cpmcnet.columbia.edu/dept/nccp/

The National Center for Children in Poverty encourages interdisciplinary thinking at the national, State, and local levels and emphasizes the needs and opportunities for early intervention with young children (ages birth to 5 years) and their families in poverty, especially in providing comprehensive services and using service integration strategies.

National Center for the Early Childhood Work Force (NCECW)
733 15th Street, N.W., Suite 800
Washington, D.C. 20005
Phone: (202) 737-7700

NCECW, formerly the Child Care Employee Project, is a non-profit resource and advocacy organization committed to improving the quality of child care services through upgrading the compensation and training of child care teachers and providers. NCECW is recognized as the national resource clearinghouse on child care staffing issues, as well as a leader in advocating for better regulation and funding of child care services. In addition, NCECW serves as the national coordinator of the Worthy Wage Campaign, a grassroots effort to empower child care workers themselves to fight for solutions to the staffing crisis. Our goal is to create a unified and powerful voice for the child care work force, advocating for fair and decent employment for care givers and reliable, affordable care for families.

The mission of NCECW is to assure high quality, affordable child care services by upgrading the training and compensation of teachers and providers. The NCECW addresses its mission through policy and program development, research and evaluation, and public education activities at the national, State and local levels.

National Child Care Association (NCCA)
1016 Rosser Street
Conyers, GA 30207
Phone: (800) 543-7161
Web: http://www.nccanet.org/
E-mail: nccallw@mindspring.com

NCCA is a professional trade association representing the private, licensed early childhood care and education community. NCCA has a dual advocacy for quality, affordable child care as well as the business of child care.

National Child Care Information Center (NCCIC)
301 Maple Avenue West
Suite 602
Vienna, VA 22180
E-mail: agoldstein@acf.dhhs.gov
Web: http://eric ps.ed.uiuc.edu/nccic/nccichome.html

Among other activities, NCCIC publishes the Child Care Bulletin 6 times per year under the direction of the Child Care Bureau, Administration on Children, Youth and Families, Department of Health and Human Services.

National Head Start Association (NHSA)
1651 Prince Street
Alexandria, VA 22314
Phone: (703) 739-0875
Web: http://www.nhsa.org

NHSA is the membership organization representing Head Start parents, staff, directors, and friends across the nation. Major activities of the National Head Start Association include education and advocacy on behalf of Head Start children, families and programs; quarterly publication of the NHSA journal, regular policy and legislative updates, special studies and reports; two annual training conferences, and leadership institutes. NHSA focuses on issues that shape the future of Head Start, and uses its national voice to inform communities, States, corporate America, and Washington lawmakers of its concerns.

National Indian Child Care Association
279 East 137th Street
Glenpool, OK 74033
Phone: (918) 756-2112

The purpose of the National Indian Child Care Association is to create and maintain an efficient and effective organization that advocates quality child care provision for Native American children, establishes a medium for information dissemination, and through a collaborative effort, builds trust and communication between Native American Tribes to perpetuate the identification and consideration of Tribal needs through a government to government relationship and presenting these assertions with a unified voice to the government of the United States of America.

National Institute on Out-of-School Time
Wellesley College Center for Research on Women
Wellesley, MA 02181
Phone: (617) 283-2547
E-mail: lcoltin@wellesley.edu
Web: http://www.wellesley.edu/ WCW/CRW/SAC/

The mission of the National Institute on Out-of-School Time (formerly the School-Age Child Care Project) is to improve the quantity and quality of school-age child care programs nationally through collaborative work with communities, individuals and organizations, and to raise the level of public awareness about the importance of children's out-of-school time. The Institute concentrates its efforts in four primary areas: research, education and training, consultation and program development.

National Resource Center for Health and Safety in Child Care
University of Colorado Health Sciences Center School of Nursing
4200 E. Ninth Ave.
Campus Box C287
Denver, CO 80262
Phone: (800) 598-KIDS (5437)
Web: http://nrc.uchsc.edu

The Maternal and Child Health Bureau's National Resource Center for Health and Safety in Child Care seeks to enhance the quality of child care by supporting State and local health departments, child care regulatory agencies, child care providers, and parents in their efforts to promote health and safety in child care. The National Resource Center will achieve this goal through information services, training and technical assistance to support regional, State, and local initiatives, conferences for sharing experiences and knowledge, and development and distribution of resource materials.

National School-Age Care Alliance (NSACA)
1137 Washington Street
Boston, MA 02142
Phone: (617) 298-5012
Web: http://www.nsaca.org

The NSACA is a membership organization composed of individuals and groups. Members range from State affiliates with hundreds of individual and group members to individual school-age

child care staff who are new to the field and seek affiliation with a professional organization. Basic membership benefits include a newsletter for members which keeps them in touch with the national organization as well as abreast of new developments in the field, a discount to the annual national school-age child care conference, discounts to video licensing, and participation in the development of an accreditation process.

USA Child Care
KCMC Child Development Corporation
2104 E. 18th
Kansas City, MO 64127
Phone: (816) 474-0434
E-mail: usaccare@aol.com

USA Child Care is a national membership association of child care and early education providers and advocates who deliver services directly to children and families. The mission of USA Child Care is to serve as a national voice for these direct service providers to ensure quality, comprehensive early care and education that is affordable and accessible to all families.

Work and Family Clearinghouse
Women's Bureau, U.S. Department of Labor
200 Constitution Avenue, NW, Room 3317
Washington, D.C. 20210-0002
Phone: (202) 219-4486
Web: http://gatekeeper.dol.gov/dol/wb/

The Work and Family Clearinghouse of the U.S. Department of Labor Women's Bureau provides statistical information on the status of women in the work force. The Clearinghouse also conducts seminars and workshops on issues relating to women, such as non-traditional jobs, work and family issues, child and dependent care, women business owners, and women's job rights.

Zero To Three: National Center for Infants, Toddlers, and Families
734 15th Street, NW
Tenth Floor
Washington, DC 20005-2101
Phone: (202) 638-1144 or (800) 899-4301 for Publications
http://www.zerotothree.org

Zero To Three, formerly the National Center for Clinical Infant Programs, is the only national organization dedicated solely to infants, toddlers and their families. Directed by a large Board of nationally-recognized experts in a wide range of disciplines, Zero To Three both gathers and disseminates information through its publications, its journal (Zero To Three), the annual National Training Institute, its Fellowship Program, specialized training opportunities, and technical assistance to communities, States and the Federal government.