**Public Policy Analysis and Education Center
for Middle Childhood and Adolescent Health**

Divisions of Adolescent Medicine and General Pediatrics,
Department of Pediatrics and Institute for Health Policy Studies
School of Medicine
University of California, San Francisco

Building a Strong Foundation:
Creating a Health Agenda for the Middle Childhood Years

Claire D. Brindis
Michael C. Biehl
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Claire D. Brindis, DrPH
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I. Introduction

MEETING BACKGROUND

Relative to other children, children between the ages of 6 and 11 have received little attention from health researchers and policymakers. While neonatology, early childhood, and adolescence are established fields—with each field having its own intellectual foundation and advocacy group, and two areas having medical specialty certifications—less attention is paid to the middle childhood years. Clearly, a strong focus on these areas is justified by the high financial costs and medical triumphs of technology-driven care in the newborn period, and the high morbidity and mortality that are associated with risky behaviors during adolescence. However, there are substantial health issues in middle childhood that also merit close attention—attention that will be necessary to create further research, improved monitoring, effective prevention programs, better health services, and policies that improve the health and well-being of the middle childhood population. Middle childhood is an important link in the continuum between early childhood and adolescence. What occurs during infancy, and early and middle childhood, influences the behaviors and the health, educational, and social outcomes of adolescents and, ultimately, adults.

During the fall of 2000, the Policy Information and Analysis Center for Middle Childhood and Adolescence* at the University of California, San Francisco, launched a Middle Childhood Initiative to increase awareness of the health and well-being needs of children ages 6-11. As our first step, we developed a monograph that summarized and synthesized the available national data concerning the health and well-being of the middle childhood population. The monograph also identifies existing gaps in middle childhood health data and research. The document describes the environment in which children live and presents diverse measures of well being, as well as traditional measures of health. Topics include demographic characteristics of the middle childhood population, health care access and utilization, mortality, chronic illnesses and disabilities, hospitalizations, oral health, mental health, risky behaviors, diet and obesity.

We next convened a panel of experts from diverse fields and disciplines to frame a health agenda for the middle childhood population (See Attachment 1). This meeting, held in May, 2001 and sponsored by the Maternal and Child Health Bureau, Health Resources and Services Administration, and the Annie E. Casey Foundation, was titled, "Building a Strong Foundation: Creating a Health Agenda for the Middle Childhood Years." The goals of the meeting were to:

- Identify the critical issues in health and well-being of middle childhood (ages 6-11);
- Describe the social, economic, and other contextual issues that influence the health and well-being of the middle childhood population; and
- Based on these issues, identify implications for research, policy and program development.

In Fall 2002, the name of the Center changed to the Public Policy Analysis and Education Center for Middle Childhood and Adolescent Health.

In preparation for the meeting, we requested that participants submit an individual list of issues they considered critical.

In addition, two over-arching questions guided the Middle Childhood Initiative meeting and the subsequent synthesis of the proceedings:

- What would it take to improve the health and well-being of children during the middle childhood years?
- What are the important issues associated with middle childhood that should be addressed in order to facilitate a healthier adolescence and subsequent adulthood?

MEETING SYNTHESIS

This document synthesizes the key ideas discussed during this meeting. To prepare this synthesis, we conducted an informal content analysis of both the meeting minutes and "critical issues lists" submitted by the participants. As a first step, we catalogued all comments from the meeting minutes and each of the submitted issues, resulting in 123 comments from the minutes and 66 responses from the critical issues lists. Based on these 189 responses (i.e., meeting comments and critical issues), we identified 21 different topics across all the responses, which we then organized into six common themes (see Table 1 and Attachment 2).

In the next section, we present the six themes and summarize the panel's discussion, presenting research questions and challenges that need to be addressed in order to advance research, develop health policies, and improve services. Where appropriate, a few relevant comments from panel participants are presented. In the final section, we outline some necessary next steps for improving the health and well-being of the middle childhood population. The issues identified and the points made in this document are the expressed opinions of the panel's expert participants and the authors. They are not intended to be a statement of facts. This synthesis represents an initial effort to explore issues that are critical to the health and well-being of this period of the life cycle.

II. Summary of the Middle Childhood Initiative Meeting

In this section, we summarize the meeting proceedings according to the six themes, identified in the review process described previously. The six themes are intended to offer a framework from which to begin creating a health agenda for the middle childhood population.

TABLE 1: SUMMARY OF SIX THEMES AND SPECIFIC TOPICS

THEME	TOPIC
1. The value of children, parents, and communities	■ The value of children ■ The importance of parents ■ The role of communities
2. Developmental tasks for the middle childhood population	■ Building awareness of developmental tasks of middle childhood and creating developmentally appropriate indicators
3. Antecedent factors of health-related behaviors	■ The role of antecedent factors during middle childhood and their relationship to the onset of adolescent health behaviors ■ The need for ecological approaches
4. Creating safer and more nurturing environments	■ The importance of safe and nurturing environments for children ■ The role of work, after-school programs, and childcare ■ The recognition of school as children's "work" ■ The impact of media on children's lives ■ The effect of a truncated childhood ■ The role of poverty
5. Specific health issues of the middle childhood population	Health Issues: ■ Mental health ■ Risky behaviors ■ Nutrition and exercise ■ Oral health ■ Special populations
6. Improving the health system	■ Developing more effective health systems ■ Creating a stronger link between school nurses, schools, and the health community ■ Creating better financing systems, including reimbursement issues ■ Adopting outcomes, utilizing quality improvement approaches, and improving accountability

THEME 1: THE VALUE OF CHILDREN, PARENTS, AND COMMUNITIES

The value of children: Members of the panel emphasized the importance of children and believe that the needs of children in this age group and their families should figure more prominently in our national research and policy agendas. There was a general consensus that the issues affecting the middle childhood population are often undervalued and not given sufficient attention by our society, especially when compared to early childhood and adolescence.

The health and well-being of the middle childhood population has important social and economic consequences. Eventually, they will become our nation's parents, workforce, and leaders, and their future well-being is shaped by our investment in them. However, making middle childhood health issues a higher public priority raises the question as to whose responsibility it is to care for and nurture these children. As family life in America continues to undergo complex changes, the issue of shared responsibility for raising and nurturing children becomes increasingly important—not just for parents, but also for decision-makers who develop policies and programs to support children (e.g., family leave, before- and after-school care, evening and summer use of school buildings).

The importance of parents: More than any other issue, panel members cited the critical role that parents and other significant adults (e.g., grandparents, caregivers, blended families, foster parents) play in children's lives. Parents and caregivers who are involved in children's lives help shape children's health behaviors and have a positive, moderating effect that often overcomes negative external influences. In short, they help create resilient families and children. Our society needs to increase its recognition of the challenges inherent in parenting and raising children and develop supportive policies. Several issues warrant policy attention, ranging from work environments that allow parents to spend more time with their children, to resources for those with mental or physical health issues. Health, education, and social service systems have an important role to play in strengthening and supporting parents' roles. Improving the quality and type of communication that occurs among public and private institutions—and the parents and guardians primarily responsible for these children—should be a policy goal. In addition to developing new prevention and intervention programs, successfully evaluated models focusing on parents and children need to be supported and disseminated. Finally, panel participants acknowledged that parents and caregivers want the very best for their children, but often lack the support from other sectors of society that could enable them to fulfill their aspirations.

The role of communities: The panel recognized that communities and community-based organizations can play an important and positive role in promoting children's health and well-being by creating the social connectedness that engenders a more nurturing environment for children. Professionals and volunteers working through community-based organizations (e.g., Big Brothers and Sisters, Boys and Girls Clubs, etc.) have been shown to positively influence children. Panel members also identified the faith community as an important influence in shaping children's values and sense of connection to the community.

To enhance the positive influence of community organizations, public and private entities must recognize their role in investing in communities—investments that include providing adequate resources to support schools, before and after-school programs, and safe recreational facilities and programs. An important research question raised by panel members is how community contexts and organizational settings influence children's health.

THEME 2: DEVELOPMENTAL TASKS FOR THE MIDDLE CHILDHOOD POPULATION

Building awareness of developmental tasks of middle childhood: The importance of a developmental perspective emerged as an overarching theme of the meeting. A developmental perspective should guide efforts to create a research and policy agenda to promote the health and well-being of the middle childhood population. Certain developmental tasks are considered to be milestones of healthy development. Tasks mentioned by panelists include a sense of mastery and competence, belonging or connectedness to family and schools, and control. These milestones include healthy behaviors that have been shown to have a protective influence on health status. Delay in achieving these milestones makes it difficult to adjust to school, perform well academically, and make friends.

In research, our understanding of children's health would be strengthened by a developmentally appropriate set of indicators to measure health status at both the population and individual level. Such indicators might include positive health indicators, such as the child's sense of connection to schools and the community, as well as achievement of other developmental tasks and milestones. Efforts by researchers to develop these indicators will face challenges, such as choosing appropriate survey language for younger children, and creating positive health measures for middle childhood.

Results from this research can shape policy and programs for the middle childhood population. Panelists emphasized the importance of educating the people and institutions that affect children's lives—including families, teachers, health care providers, community organizations, the faith community, and the business sector—about the major developmental tasks of middle childhood and normal parameters of healthy development. Education should also address the roles that gender, onset of puberty, and culture play in shaping the sequence, timing, and successful accomplishment of these developmental tasks. Policies and programs should aim to improve the ability of adults in children's lives, not only to promote the achievement of developmental tasks, but also to identify situations where monitoring or special services may be warranted for children who do not achieve these milestones within timely parameters.

We need to develop health and educational interventions that consider the developmental stages of middle childhood.

The role of antecedent factors during middle childhood and their relationship to the onset of adolescent health behaviors: Panel participants identified several research priorities related to antecedent factors and the onset of risky behaviors in middle childhood and adolescence, as well as adulthood. Antecedent factors (including risk factors and protective factors) may include family relationships and other environmental factors (e.g. peer groups, neighborhoods, communities). For example, there is increasing recognition of protective factors, such as the positive, nurturing influence of parents or families who guide their children away from risk, despite living in high-risk environments. More research studies may increase our understanding of protective factors by elucidating the specific indicators (e.g., social and emotional health) that influence positive health behavior and beliefs. In particular, longitudinal research on the variables that influence risky behaviors may help identify factors that delay and reduce the prevalence of risky behaviors during middle childhood and adolescence.

Panel participants also recognized the importance of studying the relationship between decision-making competence and the initiation of risk behaviors such as tobacco, alcohol, and other substance use. In addition, research on how health beliefs are established, influenced, and changed during middle childhood was seen as a priority. Children's understanding, perceptions, and attitudes about health behaviors develop rapidly during middle childhood, particularly as they assume greater responsibility for their own diet, physical activity, hygiene, oral health, and sleep. This research should also address mechanisms for improving decision-making competence and shaping health-promoting beliefs.

The need for ecological approaches: The panel acknowledged the importance of moving beyond traditional categorical approaches in undertaking research on antecedent factors. In addition to using a developmental perspective, researchers need to integrate both an ecological approach (i.e., studying the individual and multiple environmental factors simultaneously) and a multi-functional theoretical framework (i.e., a theory describing how the individual and multiple environmental factors influence each other). Studying any one of the major social institutions or components independently does not capture the influence exerted by others, or what happens at points where such institutions or components intersect. The multiple influences in the lives of children (e.g., individual, family, school, peer, and community) may produce either powerful, additive benefits or disadvantages with significant short-term or longer-term implications. One of the challenges in conducting this type of research is the difficulty of studying across multiple contexts, which is further complicated by differing definitions of health across different populations.

A specific contextual issue raised by panelists is the lack of high quality, accessible, affordable childcare, which not only shapes children's educational, social, and health outcomes during childhood, but can also influence their longer-term adolescent and adult outcomes. A second specific contextual issue is the effect of schools with a highly punitive approach to social or behavioral transgressions on long-term outcomes such as high school

graduation. Panelists recognized the importance of having a solid research base on which to build effective intervention programs, monitoring systems, and public policies aimed at improving the lives of children.

THEME 4: CREATING SAFER AND MORE NURTURING ENVIRONMENTS

The importance of safe and nurturing environments for children: In order to develop into healthy adolescents and adults, children need both a safe and nurturing environment. A safe environment means more than freedom from child abuse, child neglect, domestic violence, weapon use, and bullying in school. Children also need an environment that encourages them to develop and maintain positive health attitudes and behaviors and prevent health problems. Important features of a safe and nurturing environment identified by panel members include the importance of adult mentors and positive models of behavior for children, as well as real opportunities for children to experience success. Other health issues, such as parental smoking, were also highlighted as shaping the physical environment and influencing children's health-related behaviors. Panelists emphasized that creating a safe and nurturing environment will require the engagement of many sectors. A major challenge is how to convey to the business sector the importance of its investment in children so that it will effectively champion such efforts.

The role of work, after-school programs, and childcare: With more parents working than ever before, before- and after-school programs have an increasingly critical role to play in children's lives. In these settings, children can learn pro-social skills, develop positive social relationships with caring adults, and build strong peer relationships. Parents—particularly low-wage workers—face significant challenges in finding quality programs, as the American economy increasingly demands evening and weekend work shifts, when few childcare programs operate. As a result, many children are placed in poor quality arrangements or spend long hours after school in unsupervised settings, where they often engage in passive activities (e.g., television) that provide no exercise and have been linked with obesity and social isolation. Panelists identified several features of quality programs including the incorporation of a youth development perspective and the integration of health promotion strategies. In addition, panelists emphasized that parents would benefit from flexibility in the work day, allowing them to be actively involved in their children's lives. Achieving this flexibility would require government and business sectors to provide more opportunities for both paid and unpaid leave. Panelists raised important questions posed by these issues: How do fluctuations in economic stability influence the balance between the demands of work and the needs of family and children's health and well-being? What roles should the government, the business sector, and the health field play in helping to solve these issues?

The recognition of school as children's "work": Success in school is a critical factor in a child's healthy development. Panelists identified several research topics that could

U.S. parents now work more hours per year than parents in any other advanced economy. Parents' employment may leave their children vulnerable to dangerous outside influences, may interfere with their ability to provide help with homework or take their children to useful lessons and after-school programs, and may leave their children bored, lonely, or frightened.

enhance the capacity of schools to nurture healthy development. These include: what it takes to succeed in school; how learning styles influence learning; how educational success influences the health of children; how children's health affects educational success; and how to foster children's and their family's engagement in and connectedness to schools. The panel also expressed concern that the increasing reliance on standardized achievement testing in American schools may have detrimental effects on children's development. Increased funding for classes that improve test scores may come at the expense of other classes that influence health and well-being (e.g., health education classes). There is also the potential risk that efforts to improve educational outcomes will be at odds with important developmental achievements, particularly social/emotional development, social intelligence, and the child's personal sense of motivation.

The impact of media on children's lives: The panel recognized that children are increasingly exposed to a wide variety of media (e.g., radio, television, movies, video games, computers, and internet sites). These various media influence children and their health, health attitudes, gender stereotypes, and behavior. Media messages are often thought to prepare children to engage in dangerous and unhealthy behaviors. In addition, the relentless commercialization of the culture primes young people to base their self-esteem on such things as the possession of particular styles of clothing, expensive sports gear, and other items that many will never be able to acquire. Finally, long hours of passive media attention can lead children to engage in less physical activity, increasing their risk for obesity and diabetes. Media also has the potential for positive influences. For example, computers and the internet can promote healthy behaviors and educate children by providing up-to-date health information, especially in areas of higher need (e.g., urban schools, rural settings, children who are "home schooled").

Panelists articulated several research priorities that would enhance our understanding of the influence of media. Examples include: how media contributes to "jump-starting" children's emulation of adult behavior; and how children perceive the messages that they derive from the media. In addition to research, panelists offered suggestions for policies and programs including: more responsible media guidelines (e.g., guidelines for violence content for television and movies); resources for parents about appropriate media choices for their children; and parents' involvement in school programs to prepare children to become educated and savvy consumers of media and information.

The effect of a truncated childhood: The environmental influences described by panelists suggest that the actual experience of the childhood years varies considerably from an idealized image of a stress-free childhood. Children are bombarded with media portrayals of "grown up" behavior that put them under pressure to compete, to dress the "right" way, and to perform roles that are adult in nature. Societal influences appear to pressure children to grow up quickly—thus the notion of a "truncated childhood." A punitive policy in schools that adopt a "zero tolerance" stance for breaking of rules and a juvenile justice system that incarcerates large numbers of children are key examples of this

Children receive many powerful messages about what it means to be appropriately masculine, feminine, and sexual through the media. Masculinity is often associated with risk-taking (driving dangerously, alcohol and cigarette use) and femininity is associated with dangerously thin body types.

overall propensity to eliminate the ability of "children to be children." Panel members also expressed concern that the increasing regulation of children's time may come at the expense of children's development in areas such as self-regulation, mastery, and maturity of judgment.

The role of poverty: Panelists also discussed economic status as a major influence on children's health. Poverty is associated with inadequate access to health and dental care, lack of proper nourishment, and fewer educational and enrichment opportunities. Poverty places children at higher risk for a variety of negative health conditions, debilitates their parents, and leaves many potential support systems (such as safe neighborhoods and high quality after-school care) out of reach for many children and their families. Furthermore, welfare reform policies may have led to the loss of publicly-funded health insurance for many poor children due to confusion about eligibility. Families who do not qualify for cash assistance are often still eligible for Medicaid or other programs, such as food stamps. Unfortunately, both government personnel and families themselves may erroneously assume their ineligibility for cash assistance also applies to other programs, including health insurance.

Research priorities raised by panelists include: the effect of poverty on family functioning, such as increased stressors that lead to family conflict and possible family dissolution; how poverty continues to influence access to and utilization of health care systems, especially for the most under-served populations; and the impact of poverty on access to community resources, such as quality day care, after-school care, and the school system. Panelists also placed priority on policies and programs to reduce poverty and its negative effects on education, literacy, employment, and housing, as well as access to health care.

THEME 5: SPECIFIC HEALTH ISSUES OF THE MIDDLE CHILDHOOD POPULATION

The specific health issues of the middle childhood population: Panelists cited a number of specific health issues as critical to the health and well-being of the middle childhood population. These issues include mental health, risky behaviors, nutrition and exercise, oral health, asthma, and the associated health problems of children with special health care needs.

Panelists placed high priority on children's mental health needs, acknowledging that too many children with mental health disorders go undiagnosed and untreated. There are several reasons for this serious health gap: inadequate training in mental and behavioral health issues for primary care clinicians; too little time in typical office visits; failure to reimburse primary care clinicians for their efforts in identifying children with mental health disorders; too few mental health providers with specialized training in children's issues; and the division between the mental and physical health care fields. Untreated mental health disorders (e.g., anxiety, mood, conduct, and attention deficit disorders) interfere with

We need to establish a functional relationship between the child and the school system; a relationship that fosters engagement in school tasks, active learning, accomplishment and self-esteem.

school performance and family and peer relationships, and adversely affect the health and well-being of children and their families. While clinical depression appears to be relatively rare in the middle childhood population, transient bouts of depression, sadness, problems with conduct, hostility, and other preventable mental health concerns are common. Child abuse, witnessing domestic violence, bullying and victimization, school failure, and witnessing violence in the neighborhood all appear to be linked with mental health problems. The panel acknowledged the major role played by parents in influencing the mental health of their children. Parents help shape the environment in which children's mental health is nurtured, or adversely affected. Children whose parents have mental health disorders are at risk for emotional and behavioral problems. Parents who are depressed, have substance use disorders, or other mental health conditions, may not be able to provide appropriate parenting, affecting children's health and well-being.

To address these problems, panelists suggested efforts to both educate parents about identifying mental disorders in children and engage heath care providers in identifying parents with mental disorders and help them gain access to treatment. Some panel members voiced the need for a separate system that provides universal access to quality mental health care services to prevent, screen for, and treat mental illness, and to maintain good mental health. Other panel members felt this could be accomplished through existing structures by increasing training of professionals to better identify problems and develop treatment plans, including referrals where necessary.

Panelists also identified priorities linked to health-related behavior, including risky behaviors among children, and nutrition and exercise. Underscoring these priorities is the belief that healthy children are not only free of illness, but are more likely to engage in health-promoting behaviors. In the area of research, the panel pointed out the need for further research on the impact of engaging in health-damaging behaviors during the middle childhood years. In addition, there is a lack of programs and policies that promote positive behaviors and reduce the likelihood of children engaging in risky behaviors. In order to develop better health education approaches targeted to different groups, research should focus on what works, with whom, and under what circumstances.

Lack of proper exercise and appropriate nutrition often leads to obesity, diabetes, and other health problems. While obesity is increasing among children and is clearly one of the major health problems of childhood, panelists also pointed out that many children go hungry and have inadequate diets. Priority issues also included children's environments with nonexistent or limited exercise opportunities, including decreasing access to school physical education programs. Panelists discussed several strategies to reduce the prevalence of obesity and increase opportunities for physical activity. These include: nutrition education for both children and their families; healthy alternatives to fast foods; and less access to and marketing of fast foods in the home, school, and other community settings. Also important is fostering the value and fun of physical activity, possibly by encouraging recreational sports participation from an early age. Finally, panelists acknowledged the

need for safe neighborhoods and recreation areas where children can play and be physically active.

Other specific health issues identified by the panel include oral health, asthma, and the specific health issues of children with special health care needs. Oral disease is one of the most widespread chronic diseases in children and affects days missed from school, academic performance, and self-esteem. Unfortunately, oral disease is not sufficiently recognized as a valid marker of poor health and lack of health care access. Asthma is one of the most prevalent chronic illnesses in the United States, and is the most common single reason for school absences. Again, there is a relative lack of recognition of this problem by the broader society, as well as inadequate access to needed services and interventions. Finally, children with special health care needs (defined as chronic physical, developmental, behavioral, or emotional conditions) are especially vulnerable: They spend more days sick in bed, miss more school days, are hospitalized more, and have more unmet health needs than other children.

Panelists discussed potential strategies for improving service delivery to children, such as integrating services for prevalent health conditions affecting children in both schools and community-based organizations. Some models, such as school-based or school-linked services, have been implemented with some success. Panelists also placed priority on developing policies to improve the financing of services for children with special health care needs. Even with health insurance, the health issues of many of these children go unmet. In order to combat these health problems, our society will need more resources, additional research on how to implement effective interventions, and public policy that supports the interventions needed to deal with these conditions effectively.

THEME 6: IMPROVING THE HEALTH SYSTEM

Developing more effective health systems: Ideally, a child-centered approach should frame the delivery of health services for children. The panel's discussion of this topic focused on limitations of the current health care system and explored alternatives to the traditional organization of health services. For example, physician visits are often compromised by insufficient time and lack of adequate reimbursement. In addition, there is often a significant time lag between the availability of research results and their actual implementation in shaping improved clinical and program interventions. Panelists discussed strategies to better serve children. For example, coordination of health care services could be improved through the expanded use of client advocates and care managers. Such a system has been used effectively for increasing access to dental care services, where there is often a lack of readily available providers.

Creating a stronger link between school nurses, schools, and the health community: The panel focused on developing systems of care that can better link schools and health care providers. For example, school nurses can be integrated into a

It is important for health screening to look for early behavioral precursors that contribute to later health problems. Questions include: What are those precursors? What interventions are best? What is the right time and place for screening? What are appropriate measures for screening?

comprehensive system of primary care delivery, building on their strengths, such as their close working relationships with students, families, and school staff. However, due to a lack of funding, many school systems have eliminated school nurse positions, creating a significant obstacle to improving service coordination and the delivery of health care services in schools. Moreover, there are limited numbers of trained school nurse practitioners (in addition to an overall nursing shortage) that could provide primary care services. The distinctions between physicians and mid-level providers such as nurse practitioners might also pose barriers to better service coordination (e.g., reimbursement equity for services, autonomy and medical/legal authority). However, many of these barriers have been overcome in school-based health centers. A further challenge is the difficulty of effectively sharing children's health information across different systems while maintaining patient confidentiality.

Creating better financing systems, including reimbursement issues: The panel recognized that insurance limitations, payment restrictions, and managed care system barriers often hamper health care providers. Physicians often feel overwhelmed with the multifaceted needs of their patients—needs that range from preventive services to community resources. The limited reimbursement schedules of many managed care and other insurance plans frequently add a further disincentive to delivering the comprehensive services necessary to ensure the health and well-being of children. The financing and delivery mechanisms related to mental health carve-outs often mean children do not receive the services they need due to decreased coordination of care, lack of mental health providers in the area, and decreasing funds allocated to mental health issues in the health care arena. Financing for dental services is also inadequate. Only a small percentage of Medicaid dollars are designated for dental care, resulting in a lack of provider participation and reduced dental services of children covered by Medicaid. Finally, the gaps of our current system of health care coverage lead many children, particularly from low-income families, to use hospital emergency departments as their usual source of health care. Not only does reliance on emergency facilities for non-urgent conditions result in higher costs, but it also leaves many children with no primary care provider, and little or no continuity of preventive care services.

Adopting outcomes, utilizing quality improvement approaches, and improving accountability: The panel acknowledged that many programs, interventions, and policies are not sufficiently evaluated, which leaves their effectiveness unknown. Funders, providers, and communities are seeking new ways to measure the results of intervention and prevention efforts to improve the health, educational, and social outcomes of children. Outcomes-based frameworks that use specific indicators to evaluate the effectiveness of interventions and improve programs can provide this assurance of accountability. Because children's health interventions do not consistently use an outcomes-based approach to measure program effectiveness, panel members recognized the need for improved evaluation approaches that will assure the quality of the intervention and improved accountability. In order to accomplish

the goal of providing high quality interventions that meet outcome objectives, we also need to actively engage children, families and their communities in this approach.

Panelists also discussed the importance of finding more effective ways to bridge gaps that may exist between research, programs and policy in order to create a health care system that works for children and their families. This will require an increased level of understanding by policy makers regarding the importance of investing in programs and interventions that are research driven, as well as more effective ways for researchers to communicate the implications of their research findings. Several steps are needed to advance the development of more effective systems: synthesize available information on effective interventions, conduct more studies to determine effectiveness of behavioral and social interventions, and assure a wider dissemination and implementation of these successful interventions. In addition, health practitioners need training and reimbursement incentives to assure timely and quality implementation.

III. Summary and Conclusions

The six themes identified in this monograph reflect the deliberation of a panel of experts concerned with improving the health and well-being of the middle childhood population. These themes also present an initial framework from which to advance a research and policy agenda to improve the health of the middle childhood population. The agenda must be clearly articulated to the broad range of sectors that influence children's health and development. These sectors include health care providers, the health care system, and the education, social services, faith, business, media, and juvenile justice communities, as well as parents. Panelists frequently underscored the importance of engaging the many sectors that influence children's lives.

A major theme that recurred throughout the meeting was the value of children, as well as two immediate influences on children's lives: parents and community. The primary role of parents in promoting the health and well-being of children during this developmental stage was repeatedly emphasized. To be effective, any health agenda for children must include support for parents, so that they, in turn, are better able to nurture their children. Interventions for parents must recognize the dramatic increase in the number of parents who work full time. A related issue raised by panelists was the influence of parental mental health on children.

A developmental perspective should guide research and policy to improve children's health and well-being. To better assess children's progress in achieving developmental milestones, panelists placed priority on research to create better indicators of progression through middle childhood. To promote healthy development, more sophisticated research is needed on the many sectors that influence children's lives. Rather than study each sector in isolation, research should examine how these sectors interact to influence children. This research will guide the creation of policies and programs to promote healthy development.

What resources, including parents and other adults, do children have for promoting healthy behaviors? What models do children have for healthy behaviors? How will today's children perform when they are parents?

In addition to these broad frameworks for approaching health policy and research for the middle childhood population, panelists raised many specific priority issues. These include environmental influences on children's health and development. Given the large number of children whose parents work full time, access to quality before- and after-school programs plays a significant role in shaping children's environment. Much discussion focused on the importance of school as "children's work." In addition to a better under-standing of teaching and learning styles, a key concern raised by panelists was how educa-tion policies that heighten focus on testing might adversely affect the process of healthy development. Panelists also identified other influences, such as media messages that encourage adult behavior in children, which may disrupt healthy development, contributing to a "truncated childhood." Finally, panelists emphasized the harmful effects of growing up in poverty. Not only does poverty have a negative influence on access to health care services, but it also affects healthy development by placing stress on families and reducing access to resources such as quality schools and after-school programs.

Panelists also identified specific health issues of middle childhood as priorities, and discussed limitations of the health care system. Among specific health issues, mental health emerged as a high priority issue, with many children having mental health problems that go undiagnosed and/or untreated. Other priority issues include oral health, obesity and lack of exercise, risky behaviors, and children with special health care needs. Discussion of the health care system emphasized the need to better coordinate care and develop stronger systems of outcomes-based accountability.

The middle childhood years are often assumed to be an uneventful, relatively stress-free, and healthy period of life. The panel's discussion makes it clear that the health needs of this population, while different from those of early childhood and adolescence, are no less important, and no less deserving of attention. Taking action to implement the ideas presented in this document will require a comprehensive and coordinated approach—one that takes into account the complex array of factors and contexts that influence children's lives. We hope the framework and the ideas presented here will serve as a basis for the development and implementation of an effective research and policy agenda to promote the health of the middle childhood population.

Attachment 1: Meeting Participant List

BUILDING A STRONG FOUNDATION: CREATING A HEALTH AGENDA FOR THE MIDDLE CHILDHOOD YEARS

Policy Information and Analysis Center for Middle Childhood and Adolescence*
University of California, San Francisco
May 18, 2001
Annie E. Casey Foundation
Baltimore, MD
Participant List

SPONSORS:

Trina M. Anglin, MD, PhD
Chief, Office of Adolescent Health
Division of Child, Adolescent and Family Health,
Maternal and Child Health Bureau
Rockville, MD

Debra Delgado
Senior Associate
Annie E. Casey Foundation
Baltimore, MD

PARTICIPANTS:

Todd Bartko, PhD
Executive Director, MacArthur Foundation Network
on Successful Pathways Through Middle Childhood
Institute for Social Research
University of Michigan
Ann Arbor, MI

Deborah Belle, EdD
Associate Professor, Human Development Program
Department of Psychology
Boston University
Boston, MA

Patrick Chaulk, MD
Senior Associate
Annie E. Casey Foundation
Baltimore, MD

Paula Duncan, MD**
Principal Assistant to the Secretary
AHS Planning Division
Vermont Agency of Human Services
Waterbury, VT

Harriette B. Fox, MSS
Co-Director, Maternal and Child Health Policy
Research Center
Washington, DC

Julia Graham Lear, PhD
Director, The Center for Health and Health Care In
Schools, School of Public Health and Health Services
George Washington University
Washington, DC

Holly Grason, MA
Director, Women's and Children's Health Policy Center
Bloomberg School of Public Health
Johns Hopkins University
Baltimore, MD

Kathi L. Grasso, JD**
Director, Child and Adolescent Health Law Program,
Center on Children and the Law
American Bar Association
Washington, DC

Patricia P. Green, PhD
Associate Superintendent, Pupil Services
Prince Georges County Public Schools
Upper Marlboro, MD

Jo Anne Grunbaum, EdD
Chief, Surveillance Research Section
Division of Adolescent and School Health
Centers for Disease Control and Prevention
Atlanta, GA

Lynne Haverkos, MD, MPH
Ambulatory Pediatrician, Center for Research for
Mothers and Children
National Institute of Child Health and Human
Development
National Institutes of Health
Bethesda, MD

Neil Izenberg, MD
Chief Executive, Nemours Center for Children's
Health Information
The Nemours Foundation
Wilmington, DE

Margaret A. McManus, MHS
Co-Director, Maternal and Child Health Policy
Research Center
Washington, DC

Mildred Perry, PhD
Director of Pupil Services
Prince Georges County Public Schools
Upper Marlboro, MD

Judith Robinson, PhD, RN
Executive Director, National Association
of School Nurses
Castle Rock, CO

James D. Sargent, MD
Associate Professor, Department of Pediatrics and
Adolescent Medicine
Department of Community and Family Medicine
Dartmouth Medical School
Dartmouth-Hitchcock Medical Center
Lebanon, NH

Bruce Simons-Morton, EdD, MPH
Chief, Prevention Research Branch
Division of Epidemiology Statistics & Prevention
Research, National Institute of Child Health and
Human Development
National Institutes of Health
Bethesda, MD

Mark L. Wagner, DMD**
Professor, Department of Pediatric Dentistry
Dental School
University of Maryland, Baltimore
Baltimore, MD

Heather Weiss, EdD
Director, Harvard Family Research Project
Harvard Graduate School of Education
Harvard University
Cambridge, MA

Linda Wiltse, PhD
Vice President of Teen Services
Boys & Girls Clubs of America
Atlanta, GA

POLICY INFORMATION AND ANALYSIS CENTER FOR
MIDDLE CHILDHOOD AND ADOLESCENCE*

University of California, San Francisco
San Francisco, CA
Charles E. Irwin, Jr., MD, Director
Claire D. Brindis, DrPH, Associate Director
Robert H. Pantell, MD, Associate Director
M. Jane Park, MPH, Coordinator
Michael C. Biehl, MA, Senior Research Associate

*Since the meeting the name of our Center has
changed to the Public Policy Analysis and Education
Center for Middle Childhood and Adolescent Health.

**We have listed participants' affiliations at the
time of the meeting. Since the meeting, the follow-
ing individuals have moved to new institutions:
■ Paula Duncan, Vermont Children's Health
  Improvement Program, Department of Pediatrics,
  College of Medicine, University of Vermont
■ Kathi Grasso, Research and Program Development
  Division, Office of Juvenile Justice and Delinquency
  Prevention, Department of Justice
■ Mark Wagner, Special Olympics Special Smiles,
  Special Olympics

Attachment 2

Topic	Number of meeting comments	Number of critical issues
Theme 1: The value of children	4	0
Theme 1: The importance of parents	17	1
Theme 1: The role of communities	6	0
Theme 2: Developmental tasks for the middle childhood population	4	5
Theme 3: The role of antecedent factors during middle childhood of health-related behaviors	14	6
Theme 3: The need for ecological approaches	3	1
Theme 4: Creating safer and more nurturing environments for children	9	8
Theme 4: The role of work, after-school programs, and childcare	8	4
Theme 4: The recognition of school as children's "work"	8	2
Theme 4: The impact of media on children's lives	2	3
Theme 4: The effect of a truncated childhood	3	2
Theme 4: The role of poverty	0	6
Theme 5: Mental Health	12	5
Theme 5: Risky Behaviors	1	5
Theme 5: Nutrition and Exercise	2	5
Theme 5: Oral health	1	1
Theme 5: Special populations	0	2
Theme 6: Developing more effective health systems	10	0
Theme 6: Creating a stronger link between school nurses, schools, and the health community	9	2
Theme 6: Creating better financing systems, including reimbursement issues	3	8
Theme 6: Adopting outcomes, utilizing quality improvement approaches, and improving accountability	7	0
Total	**123**	**66**