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Yhese went out to Dr. Borgs last night

The First Step

A HEALTHY START

"In every child who is born," James Agee wrote, "under no matter what circumstances and of no matter what parents, the potentiality of the human race is born again."[1] Last year, more than 4,200,000 babies were born in the United States, the greatest number in the last thirty years.[2] The day-to-day physical nourishment these children receive—the quality of care they get during the first months and years of life—will shape profoundly their readiness for school. If there is one right that *every* child can claim, it is the right to have a healthy start.

For the nation's first education goal to be met, health workers and educators must join in common cause. Failure to do so will have a devastating impact on America's educational and economic future-and most especially on our children. The Business Roundtable, comprised of top corporate leaders, makes this compelling claim: "Raising our expectations for educational performance will not produce the needed improvement unless we reduce the barriers to learning that are represented by poor student health."[3]

Responding to this challenge, a three-pronged strategy is proposed: First, as a long-term plan, we call for a national education program, a course of study in every school to educate tomorrow's parents about good parenting and good health. Second, we urge that the federal nutrition program for women, infants, and children, better known as WIC, be fully funded. Third, to guarantee access to basic health care for all mothers and babies, we call for the establishment of a national network of Ready-to-Learn Clinics, building on existing programs.

During the past one hundred years, child health in this country has undergone a remarkable transformation. Dreaded diseases such as typhoid fever, diphtheria, tuberculosis, polio have been largely conquered. Milk contamination, which once killed thousands of children, is now effectively controlled. Mumps and measles which still threaten are, however, no longer widespread epidemics. Today, the odds of a child in the United States dying from disease or injury are one-half of what they were in 1950.[4]

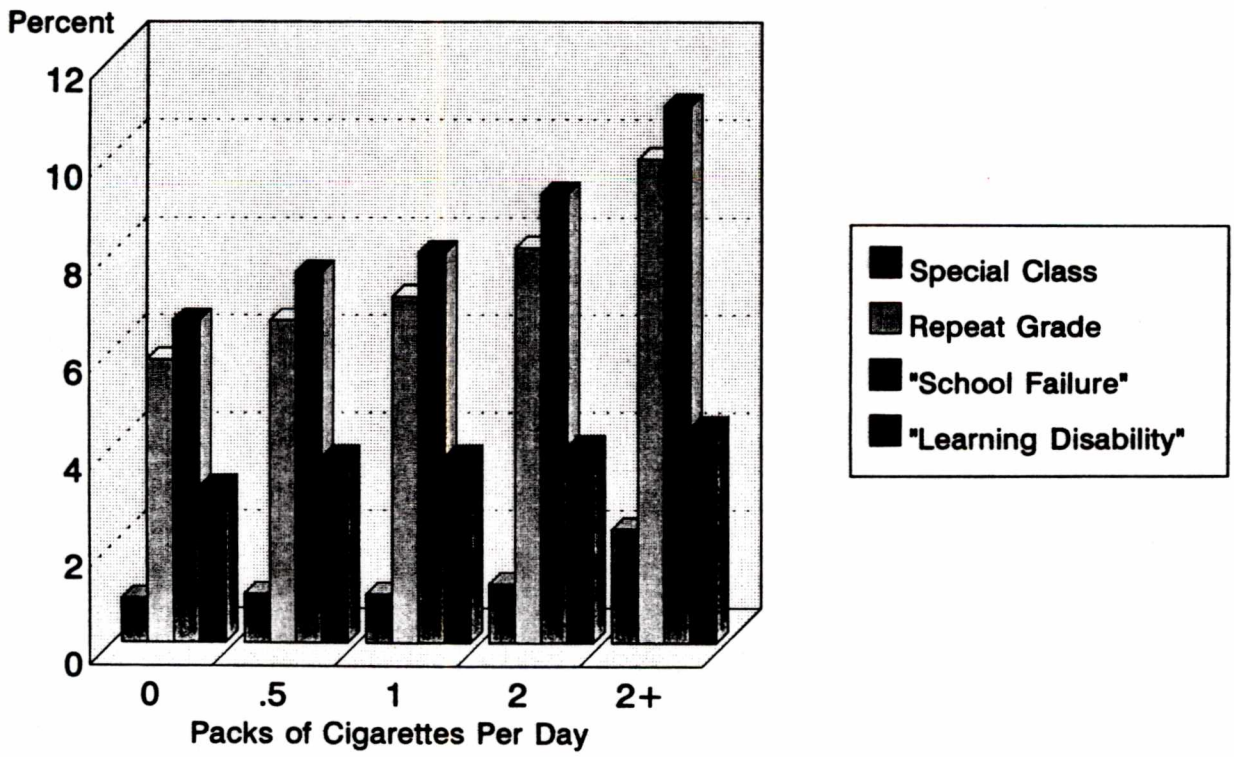
Still, our rejoicing should be muted. Despite miraculous medical advances, large numbers of babies in this country are physically deprived in ways that diminish their quality of life and restrict their capacity to learn. While no child should live a single day with pangs of hunger, it is the nation's shame that nearly half a million children are malnourished and that twelve million are hungry some time every month.[5] Further, fetal malnutrition now affects up to 10 percent of babies born in the United States. Studies show that damage to the fetus caused by poor nourishment during the twelfth to twenty-fourth weeks of gestation-a time most critical to brain growth-cannot be reversed.[6]

Clearly, good health begins before birth. And what the pregnant woman eats and drinks relates to school performance. A mother's caloric and protein deficiency during pregnancy can permanently impair the child's learning ability, through a decrease in the number of brain neurons.[7] Fetal exposure to alcohol increases the child's risk of language deficiency and mental retardation.[8] Further, when an expectant mother takes just one dose of drugs, the fetus in the amniotic sac is bathed in drugs for days, risking prospects for physical impairment.[9] Drug use by the mother or father even before conception may damage a child.[10]

Mothers who smoke during pregnancy place their child at risk for low birthweight, asthma, and growth retardation.[11] Children of smokers also tend to lag behind their peers in cognitive development and educational achievement and are particularly subject to hyperactivity and inattention. Further, the effect of smoking is cumulative, with children of heavy smokers scoring lower on verbal tests than those of lighter smokers, or nonsmokers.[12] As one researcher put it: "At no time does the well-being of one individual so directly depend on the well-being of another."[13]

Figure 1

Figure 1.
Relation of Maternal Cigarette Smoking During Pregnancy and Various Measures of "School Failure" & "Learning Disability" at Age 7



SOURCE? —

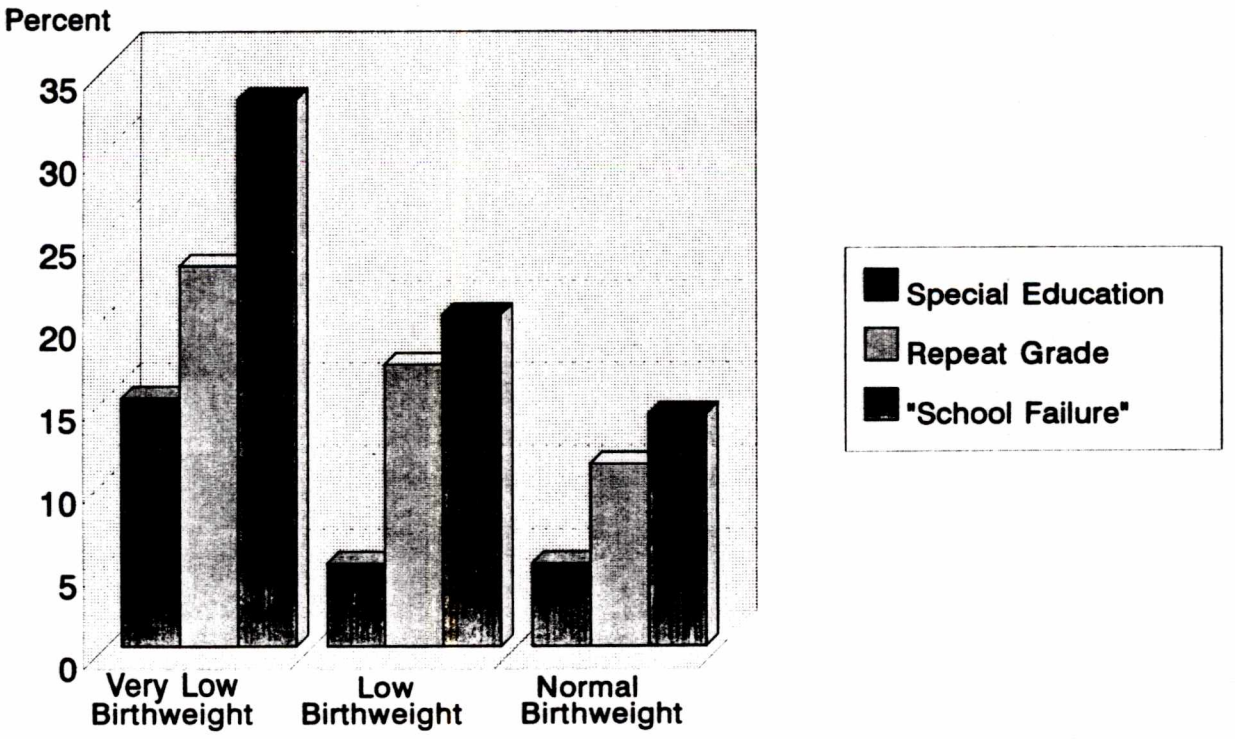
Approximately forty thousand babies are born each year with serious problems that are a direct result of alcohol abuse by mothers during pregnancy. About seven thousand of them have fetal alcohol syndrome, a condition that results in mental retardation. Another thirty-three thousand suffer problems that restrict their capacity to learn—limited attention span, speech and language deficiencies, and hyperactivity. Further, more than 10 percent of all newborns in this country—425,000 in 1988—had mothers who used marijuana, cocaine, crack, heroin, or amphetamines during pregnancy. Cocaine and crack are associated with prematurity, smaller head circumference, and lower birthweight-all of which place a child educationally at risk. (cite)

Figure 2

Unless America takes bold steps, unless we have dramatic intervention, this shocking pattern of child abuse is certain to increase. Consider, for example, that ninety-one percent of the nation's high school seniors—tomorrow's parents—have, used alcohol, 66 percent have smoked cigarettes, 44 percent have tried marijuana, and 31 percent have experimented with an illicit drug other than marijuana (table 1).[14] Beyond these abuses, even young people not involved in such abuses are often poorly nourished and do not get adequate exercise.[15]

In a Carnegie Foundation survey of teachers, more than half of the respondents said that "poor nourishment" among students is a problem at their school. Sixty percent cited "poor health" as a problem.[16] One teacher in a midsize city observed: "Every year there seem to be more physical problems at our school that interfere with learning. I know that children who don't eat well or don't get rest can't do well in school. Yet, that's exactly what I'm seeing more and more." A kindergarten teacher said: "An increasing number of children who come to school have attention problems that I'm being told relate to poor nutrition and deficiencies in their diet." Another teacher told us: "Today's students take far better care of their stereos than they do their own bodies. And what's so sad is that later they'll pass on this abusive behavior to their own children."

Figure 2.
Relation of Birthweight to Various Measures of "School Failure" among Children Ages 4-17



Source.

Table 1

High School Seniors in the Class of 1989
Who Have Used Various Drugs

Drug type	Percent
Alcohol	91%
Cigarettes	66
Marijuana/Hashish	44
Illicit drugs other than marijuana	31
Cocaine	10
Crack	5

SOURCE: National Institute on Drug Abuse, 1991.

This nation simply must interrupt the cycle of ignorance about physical well-being that has such tragic consequences for children. Students of all ages urgently need to be taught the facts of health, as well as the facts of life. Specifically, we propose that every school district in the country offer a new health course as a requirement for graduation, with units of study threaded through the whole curriculum, from kindergarten to grade twelve. "What we need is a *national* policy," says Ramon Cortines, superintendent of schools in San Francisco, "one that supports comprehensive school health education."[17]

In our proposed new curriculum—called, perhaps, "The Life Cycle"—wellness and prevention would be central, integrating themes. Some study units could be taught as separate subjects, others might easily be woven into such courses as history, science, and physical education. Students progressing from grade to grade would—through this health program—gain respect for their own bodies and learn to appreciate the mystery of birth, the nurturing of life, and the imperative of death. Very early they would begin to reflect on what an awesome responsibility it is to bring a new life into the world.

As a capstone unit, we propose that each student participate in an "each-one-teach-one" project, passing along to family and friends what they have learned in school, thus

expanding prospects for good health. There is precedent for this suggestion. At the turn of the century, a cholera epidemic swept New York City. Thousands of babies died. In response, the public schools organized a health course for high school girls to instruct them in the care of babies. After completing their training, the students—called "Little Mothers"—received an "honor badge" and became health teachers in their own homes. Each was made to understand that she had a weighty obligation to aid in saving babies' lives.[18] Could schools today introduce, for both boys and girls, a modern-day version of the student health corps that was so effective nearly a century ago?

The Life Cycle curriculum we propose would, of course, vary from school to school. Still, common threads would be required, and a program designed by the New York Academy of Medicine illustrates what we have in mind. This health course includes a unit called "Growing Healthy" in which elementary students study such topics as physical and emotional health, family life, and the damaging effects smoking, drugs, and alcohol have on the body. The program also has a middle-school unit called "Being Healthy" which focuses on adolescent growth, physical fitness, and such health issues as AIDS, "Family Living," and "Nutrition for Life."[19]

In Philadelphia, a group called "Education for Parenting," also has an appealing health education program called, "Learning About Parenting: Learning To Care." Goals include helping students understand and be more cautious about becoming parents, decrease the incidence of child abuse, and learn to value parental roles. This curriculum, which extends from kindergarten through grade twelve, focuses the responsibilities and rewards of parenting. A unique feature is to have new parents and their babies actually visit the classroom to give students firsthand understanding of the challenges of raising children by allowing them to observe and record the growth and abilities of infants.

Libby Blank, a first grade teacher in Pennsylvania, has a young mother who brings her baby, Mark, visit her class. She says, "Before Mark's visit, we predict what he will do. We use a ball to experiment and record Mark's actions and skills. We measure his head circumference and body length. The children then write creative stories about the baby. Learning becomes more meaningful when it's related to personal experiences and feelings. We feel fortunate indeed to be participants in this program."[20]

"Education for Parenting" has been working with schools across the nation with impressive results. Myriam Miedziam, a professor at Columbia University, after evaluating the program makes these observations: "Regardless of how much detail these boys and girls remember by the time they become parents . . . the course has imbued them with a deep sense of the importance of parenting. Children get a sense of the reality of parenting, of the sacrifices and demands as well as the joys."[21]

Health education can, indeed, make a difference. A Rand Corporation study found that eighteen weeks of health instruction produced a significant decrease in smoking and other drug use. (cite) A health education program in South Carolina was credited with reducing adolescent pregnancies. **(cite)** A Minnesota health project reduced the numbers of students who started smoking. **(cite)** A study sponsored by The Metropolitan Life Insurance Foundation concluded that the percentage of students using alcohol dropped from 43 to 33 percent after health instruction, and smoking decreased from 33 to 14 percent (table 2). "The evidence that health education works is overwhelming but *national* policy is needed," is the way the National Health Education Consortium puts it, [22]

Table 2

Students Who Reported They "Often" or "Sometimes" Used
Various Substances After One and Three Years of Health Education

	After One Year	After Three Years
Alcohol	43%	33%
Cigarettes	33	14
Drugs	13	5

SOURCE: National Health/Education Consortium, The Metropolitan Life Insurance Foundation.

Educating today's students—tomorrow's parents—is a long-term strategy, one that must get started now. Meanwhile, to achieve school readiness for all, another crisis—poor nutrition among at-risk mothers and babies—also requires immediate attention. The reality is that if a pregnant woman does not eat well her nutritional deficiency can interfere with the fetus's development, increasing the possibility that the baby will be malformed or mentally or physically retarded.[23] Yet, in the United States today, literally hundreds of thousands of expectant mothers are undernourished. It's also a depressing fact that millions of preschool children are not breast fed and go day after day without the nutrition needed for good health and effective learning.

How should we proceed?

The federal nutritional program, called WIC, was signed into law in 1972 precisely to meet the health needs of poor women, infants, and children. Milk, cheese, eggs, and cereal are distributed monthly through eight thousand service centers across the country.[24] Currently nearly five million low-income women and their children are being served.[25]

WIC is effective. It is successful in bringing mothers into prenatal care during the first trimester of pregnancy, in reducing infant mortality, in raising birthweights, and later, in improving the educational performance of children.[26] WIC is a solid economic investment, too. A recent study found that every dollar we invest in WIC saves four dollars or more in medical costs alone.

Yet despite WIC's record of success, only 55 percent of those eligible are served, leaving vast numbers of mothers and babies undernourished. How can we live comfortably with the fact that millions fail to receive even the minimum food supplements they require. Surely the time has come to guarantee that all of the nation's mothers and babies will be well fed. We propose that WIC be fully funded—increased from $2.4 to $4.5 billion.[27] This is a moral imperative. As Winston Churchill said, "there is no finer investment for any community than putting milk into babies."[28]

We also recommend that the educational component of WIC be strengthened. According to existing regulations, mothers who register for WIC are eligible to receive not just good nutrition, but parenting education, too. The problem is that most WIC offices are overburdened and the teaching component is often cursory at best. Still, this is a moment to be seized. It's an occasion when mothers can receive essential

information regarding good health and child development. We propose, therefore, that every WIC office sponsor a "parent seminar series," one that covers all dimensions of school readiness, from physical well-being to moral development. The WIC appropriation should be further increased to accommodate this program.

Health education for future parents is essential. Good nutrition for poor mothers and babies is essential. A third key factor in improving the health and learning prospects of children is ensuring quality prenatal care for all mothers. The period *before* birth is critical. A healthy fetus, by the sixth month, has already developed ten billion neurons, nearly the full number needed for total brain development,[29] and pregnant mothers should receive good health care beginning in the first trimester.

Infants whose mothers do *not* receive adequate care during pregnancy are more likely to be physically at-risk, intellectually deficient and restricted in their capacity to learn.[30] Yet, one-quarter of all pregnant women in the America receive belated prenatal care, or none at all.[31] Further, the percentage of women in this country getting substandard care has been growing.[32] Author Lisbeth B. Schorr in commenting on this crisis observed: "The United States is virtually alone among nations—and absolutely alone among Western industrial democracies—in its grudging approach to the provision of maternity care. Government in the United States has . . . never assumed responsibility for assuring that every pregnant woman gets the health care she needs to maximize the chances of a healthy birth."[33]

The most formidable barrier is cost. Medicaid, authorized by Congress in 1965, provides health coverage for more than 27 million people. Yet nine million women of reproductive age have no health insurance of any kind.[34] In addition, even though Medicaid coverage has been expanded to include young children, there are still 1.5 million youngsters under the age of six not covered by this or any other program.[35] Universal health insurance is essential.

But even with health insurance millions of women and children still would remain unserved because of this country's chaotic health *delivery* system, which makes access to care so shockingly uneven, really immoral. In rural areas where 20 percent of Americans reside, hundreds of health clinics have closed in recent years[36]. For many, prenatal care is, for many, miles away—or nonexistent.[37] In Georgia, for example,

ninety-two counties have no obstetrician, forty counties have no hospital, and thirteen counties have no family physician, according to a recent survey. "In many rural communities of Michigan, mothers may have to travel a hundred miles or more to get prenatal care," according to Veda Sharp of the Michigan Department of Health. Even in large cities, with sprawling medical centers and well trained physicians, health care in the poorest neighborhoods has actually decreased in the past twenty years, leaving mothers and children with no place to go.[38] This is inexcusable.

Providing access to basic health care for all mothers and their children must become a top priority, a position vigorously being promoted by the National Governors' Association. The governors in their 1990 report declare: "If steps are not taken now to build a real health-care system, too many children will continue to come to school unprepared to learn, too many adolescents will continue to face serious but preventable health problems."[39]

Therefore, we call for a national network of "one-stop shopping" health and education centers to serve all low-income mothers and children. These centers, which could be called Ready-to-Learn Clinics, would integrate health, education, and social services, building on the current system—making it more equitable and more accessible.

Marian Wright Edelman, president of the Children's Defense Fund, states with urgency the challenge: "Children must have their basic needs for health care . . . and nutrition met if they are to be prepared to achieve in school. A child with an undiagnosed vision problem, or without the means to get glasses once a problem has been diagnosed, hardly can learn to his potential. A child whose intellectual development is stunted by lead poisoning cannot excel in the classroom. . . . Nor can a hungry child. . . . All of this is common sense. Any parent, any teacher, any doctor, any politician understands these connections. The puzzling thing is why we can't do what we all know makes sense, giving all children the essential and cost-effective early investments they need to prepare them to achieve."[40]

Creating a *national* network of Ready-to-Learn Clinics—one that pulls together and extends the existing, fragmented "system"—would at first blush, appear to be a hugely complicated task. But this is something America can and must do. Let's not forget that we created in this country a network of public schools—eighty-three thousand of them from Bangor, Maine, to Honolulu, Hawaii, serving more than forty-six million children.

This was accomplished precisely because the citizens of this country shared the conviction that educating every child was far too important to be left to chance.

Clearly, the time has come for America to create a "common" health network, modeled after the "common" schools. Today, no one would tolerate a fragmented system of public education, in which some children went off to school each morning while others had no place to go. How, then, can we tolerate, year after year, a broken system of health care that denies access to millions of our children? After all, health is a *prerequisite* to education.

A Ready-to-Learn Clinic would offer prenatal and maternal care, as well as health service to children up to age five, including regular checkups, routine screening for hearing and vision problems, and testing for lead poisoning, which the American Academy of Pediatricians recently labeled an "epidemic."[41] Protecting every child against childhood diseases through inoculation is crucial, too. Indeed, it is truly shocking that 20 percent of our preschool children have not been vaccinated against polio, that the incidence of whooping cough is three times higher than it was a decade ago, and that the reported cases of measles have skyrocketed to more than twenty-six thousand in 1990.[42] Surely, this nation can accomplish something as simple and as essential as protecting every child against contagious illness (table 3).

Table 3

Preschool Children Who Have Completed Immunizations

	Year	DTP[43,44]	Measles [45]	Polio [46,47]
United States	1985	64.9%	60.8%	55.3%
Belgium[48]	1987	95.0	90.0	99.0
Denmark	1987	94.0[49]	82.0	100.0
France[50]	1986	97.0	55.0	97.0
Germany (FRG)[51]	1987	95.0	50.0	95.0
The Netherlands	1987	96.9	92.8	96.9
Norway	1987	80.0	87.0	80.0
Spain	1986	88.0	83.0	80.0
Switzerland	1986	90-98	60-70	95-98
England and Wales	1987	87.0[52]	76.0	87.0

SOURCES: Bytchenko, 1988; USPHS, 1989; National Statistics Offices (Denmark, Netherlands, England, and Wales).

A Ready-to-Learn Clinic also would provide parent education and serve as a referral center, working collaboratively with WIC. Above all, the clinic program would be linked to Head Start and the public schools, recognizing, especially the excellent service now provided by many county health clinics. Indeed, the Ready to Learn clinic might well be located at or near a school, since health and education are so closely tied. Further, schools are found in every neighborhood. They have wide public trust and to have a health service close by would benefit both institutions. Finally, an interagency advisory body might be formed to ensure that the various health and education institutions in the country work together toward common goals.

States, we are convinced, should take the initiative in creating Ready-to-Learn Clinics, just as they led the way in building a national network of public schools. To begin the process, a county-by-county Maternal and Child Health Master Plan should be prepared by every state, one that would include: First, an inventory of the number of

low-income mothers and children in each county; second, a description of existing services; third, an analysis of what would be needed to fill the gaps; and fourth, a plan to coordinate all children's health, education and social services programs in the county. In communities where health clinics already exist, services might be expanded. In others, new clinics would be needed. And putting together all state plans would lay the foundation for a *national* network of Ready-to-Learn Clinics.

Several states have launched just such a network. In Kentucky, for example, the Reform Act of 1990 authorized "family service centers" in school districts where 20 percent of the children participate in the federal school-lunch program. Hawaii's "Project Healthy Start" has one-stop centers all over the state for children and families at risk. The program also includes a home-visit plan to help parents under stress. North Carolina's "Baby Love" program gives basic health care to pregnant women through "maternity care coordinators" who act as ombudsmen, guiding the client into the system. Results of the Baby Love program are impressive. In 1988, the mortality rate for infants born to women not in the program was 14.7 percent, for those in the program, it was 9.6 percent.

How might the Ready-to-Learn Clinics be financially supported? The first step is to eliminate duplication that wastes so much time and money. In one state, for example, thirty-seven state agencies are administering one hundred-sixty programs for children and youth in seven different departments. We are convinced that improved coordination would save literally millions of dollars, redirecting resources away from paperwork to people. In Seattle a new child health project seeks to integrate all money earmarked for children's services, including community health centers, hospitals, school districts, city health departments, mental health, and substance abuse programs. The purpose is "to streamline the organization and delivery of child health services," says Miscall Beachler at the Robert Wood Johnson Foundation, which supports the program's administration and planning. Coordination of health services is clearly an idea whose time has come.

Still, more money will be needed. The federal government has, we believe, a special role to play. Currently, states receive $530 million from the Community and Migrant Health Centers program which supports two thousand centers for needy clients from coast to coast. Funding for this program could be expanded, and the Community and Migrant

Health Centers could establish satellite Ready to Learn clinics in unserved areas in their region. Further, the Maternal and Child Health Block Grant program gives $500 million annually to states to help fund health services on a discretionary basis. Appropriations for this program also should be increased. We recommend, however, that states receive *additional* funds for these programs only after the need has been clearly documented, based on the county by county inventory.

As for staffing, we suggest that every Ready-to-Learn Clinic be headed by a health professional—a nurse practitioner, professional midwife, or senior nurse—with a private physician or public health officer available for referral. Ideally, the staff also would include a social worker, a parent educator, and trained volunteers—retirees or college students, for example—to help with parent education and transportation. Home visits surely should be a central feature of the program and clinics should focus on training parents, who in turn would teach other parents what they've learned. However, we recommend that National Health Service Corps funds be expanded.

In Houston, a program called "De Madres a Madres"—from mothers to mothers—uses women as volunteers who have received eight hours of intensive training. In a barrio where 40 percent of the pregnant women do not start prenatal care early enough, or fail to start at all, fifty women—bank clerks, waitresses, and school cafeteria staff—have contacted three thousand pregnant women, visiting them in their homes, guiding them to prenatal care, and accompanying them to fill out papers. Results are impressive. Among clients that have been tracked, not one has had a low-birthweight baby. and in their next pregnancy most begin prenatal care much earlier. Texas Woman's University also initiated the program and has turned it over to trained volunteers.

Finding trained health professionals to staff the Ready to Learn Clinics will, of course, be a special challenge. But here again, Washington can help. Since 1970, the National Health Service Corps has given scholarships and loans to about thirteen thousand students, doctors, nurses, and other professionals who agreed to work in underserved communities after training.[53] Recently, due to budget cuts, the number of participants has dramatically declined. We also urge that special priority be given to the recruitment and training of professional midwives and nurse-practitioners who can provide quality maternal and child care.

The "one-stop health clinic" approach to health care is of the sort we have in mind are now widely recognized as the only way to go. Just two years ago President Bush signed

into law a new program that parallels the kind of integrated service we have in mind. The project, called the "Comprehensive Child Development program," calls for one-stop health centers. Services includes basic health care for children, such as screening, immunization, early detection programs, and nutrition services. For parents services include prenatal care, parent education, and referral. First year appropriations were $25 million, funding programs in twenty-four cities. Another $20 million was added to include an additional twenty-one sites, all stressing early intervention for at-risk children and their mothers, by better integrating services. Such projects should be expanded.

Hundreds of other programs can be found from coast to coast. A Comprehensive Health Center in Jackson, Mississippi provides primary care services, acute sick-care, screening, and immunization to about four thousand preschoolers every year. The Center provides prenatal care and delivery, a birthing center, and nutrition counseling, as well as referrals to drug and alcohol treatment centers. A satellite health clinic located in a local high school is regarded as a model in community health care. But according to Dr. Aaron Shirley, the clinic's budget has been frozen for the last five years, at the same time that they are "seeing more and more patients in poverty who can pay only 20 to 40 percent of the actual costs, if that much. Poverty is increasing, but our funding is staying the same. Also, medical costs are rising. Our equipment is twenty years old, but we don't have enough money to make capital improvements. We have just enough to keep the door open."[54]

"TW Cares" a community health center is located in a low-income housing project in Denton, Texas, where mostly single mothers and children live. The program was started two years ago by Texas Woman's University College of Nursing after the public hospital closed, leaving the low-income population with no place to go. Besides providing primary care, the program educates families about health and wellness and refers clients to providers of the services they need. If a child is sick they help find a doctor. If cases of abuse or neglect arise, they bring families into appropriate programs run by the police and the department of human services. There is also a dental clinic on site where last year $30,000 worth of services were donated. TW Cares works intimately with the local school, where one-third of the children are without insurance, and therefore rely on the school nurse for help.

The conclusion is clear: The first step in a national Ready-to-Learn Campaign is a healthy start for every child. For this to be accomplished, better education, good nutrition, and basic health care for all mothers and babies are required. "We absolutely cannot afford to wait until the school bell rings to attend to our children's health," is the way National Health Education Consortium put it. "We need to start thinking of immunizations, well-child care and health screenings, proper food, and prevention of health problems as being just as important to education as books and pencils and chalkboards and teachers. We need to act swiftly—and we need to act boldly. There is no time to waste."[55]

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NOTES

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1. James Agee and Walker Evans, *Three Tenant Families: Let Us Now Praise Famous Men* (Boston: Houghton Mifflin Company, 1941).

2. *USA Today*, August 2, 1991.

3. "Essential Components of a Successful Education System," *The Business Roundtable Education Public Policy Agenda*, 2.

4. Historical Statistics of the United States: Colonial Times to 1970, Part I, U.S. Department of Commerce, 1975, B181-192 and *U.S. Children and Their Families: Current Conditions and Recent Trends, 1989* (Washington: U.S. Government Printing Office, 1989), A7.

5. Physicians' Task Force on Hunger in America, *Hunger in America: The Growing Epidemic* (Middletown, Connecticut: Wesleyan University Press, 1985), 8-9, 17.

6. Lucille F. Newman and Stephen L. Bukas, *Every Child a Learner: Reducing Risks of Learning Impairment During Pregnancy and Infancy* (Denver: Education Commission of the States, 1990).

7. Scott R. Creel and Jack L. Albright, "Early Experience," *Veterinary Clinics of North America—Food Animal Practice*, 1987, vol. 3, no. 2, 251-268.

8. ECS

9. Ounce of Prevention Fund, "Education—Does It Make Any Difference When You Start?," 21.

10. ECS

11. Lucille F. Newman and Stephen L. Bukas, *Every Child a Learner: Reducing Risks of Learning Impairment During Pregnancy and Infancy* (Denver: Education Commission of the States, 1990).

12. Lucille F. Newman and Stephen L. Bukas, *Every Child a Learner: Reducing Risks of Learning Impairment During Pregnancy and Infancy* (Denver: Education Commission of the States, 1990).

13. "Healthy Brain Development: Precursor To Learning," *National Health/Education Consortium*, 1991, 1.

14. *The Washington Post*, November 14, 1991.

15. *USA Today*, August 7, 1991.

16. The Carnegie Foundation for the Advancement of Teaching.

17. National Health/Education Consortium, Institute for Educational Leadership.

18. Robert H. Bremner, *Annual Report 1909* (New York: 1911), 163, 170-171; and *Children and Youth in America: A Documentary History, Volume II: 1866-1932*, Parts Seven and Eight (Cambridge, MA: Harvard University Press, 1971), 1059-1062.

19. Verbal communication, Fran Kaufman, the New York Academy of Medicine, November 1991.

20. Libby Blank, Presentation to District 8 Principal's Meeting, Anne Frank School, March 15, 1991.

21. "Education for Parenting."

22. National Health Education Consortium, May 1991.

23. Betty Watts Carrington, Ed.D, CNM, "The Effects of Socioeconomic Factors, Especially Poverty, Malnutrition, Environment and the Medicalization of Pregnancy and Childbirth on Learning Outcomes" (unpublished paper, June 1988),

24. "National Evaluation of the Special Supplement Food Program for Women, Infants, and Children (WIC)," *The American Journal of Clinical Nutrition*, vol. 48, no. 2, August 1988.

25. FRAC.

26. "Estimated Funding for WIC Applicants," Food Research and Action Center, March 13, 1991.

27. *Beyond Rhetoric: A New American Agenda for Children and Families*, National Commission on Children, 1991, 151.

28. *The Oxford Dictionary of Quotations*, 3rd ed. (Oxford, England: Oxford University Press, 1980), 150.

29. "Healthy Brain Development: Precursor to Learning," Natural Health/Education Consortium, January, 1991, 2.

30. Lucille F. Newman and Stephen L. Bukas, *Every Child a Learner: Reducing Risks of Learning Impairment During Pregnancy and Infancy* (Denver: Education Commission of the States, 1990).

31. Su Sheela Singh, Jacqueline Darroch Forrest, and Aida Torres, *Prenatal Care in the United States: A State and County Inventory*, The Alan Guttmacher Institute, vi.

32. Su Sheela Singh, Jacqueline Darroch Forrest, and Aida Torres, *Prenatal Care in the United States: A State and County Inventory*, The Alan Guttmacher Institute, vi.

33. Lisbeth B. Schorr, *Within Our Reach: Breaking the Cycle of Disadvantage* (New York: Anchor Press, 1988), 68.

34. Children's Defense Fund.

35. National Center for Children in Poverty.

36. "A Healthy America: The Challenge for States," The National Governors' Association, 1991, 25.

37. "A Healthy America: The Challenge for States," The National Governors' Association, 1991, 25.

38. "A Healthy America: The Challenge for States," The National Governors' Association, 1991, 26.

39. "A Healthy America: The Challenge for States," The National Governors' Association, 1991, 9.

40. Children's Defense Fund, *S.O.S. America! A Children's Defense Budget*, 1990, 7.

41. The American Academy of Pediatrics to the House Committee on the Environment and Public Works, June 27, 1990.

42. "From the Surgeon General, U.S. Public Health Service," *Journal of the American Medical Association*, vol. 265, no. 11, March 20, 1991, 1364.

43. Diphtheria-tetanus-pertusis.

44. U.S. rates are for children ages 1-4; European figures are for children under 3.

45. U.S. rates are for children ages 1-4; European figures are for children under 2.

46. Three doses or more.

47. U.S. rates are for children ages 1-4; European figures are for children under 1-3.

48. Estimated.

49. Rate is for combined diphtheria, tetanus, and polio immunizations.

50. Estimated.

51. Estimated.

52. Rate is for diphtheria and tetanus; rate for pertussis immunization is 73 percent.

53. National Commission on Children, Hon. J.D. Rockefeller, III, Chair, *Beyond Rhetoric: A New American Agenda for Children and Families* (Washington, D.C.: U.S. Government Printing Office, 1991), 46.

54. Verbal communication with Aaron Shirley, MD, November 1991.

55. National Health/Education Consortium, Institute for Educational Leadership.