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Infant Mortality and Social Work: Legacy of Success

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Although it is not widely known, social workers have had a substantial part in the impressive reduction in infant mortality achieved in the United States during this century. This article reviews that contribution, noting a decline in interest in infant mortality in the profession beginning in the 1950s. Recent trends are noted that seem to suggest a renewal in the profession's interest in this important subject.

The twentieth century has witnessed a 92 percent reduction in infant mortality in the United States. Whereas an estimated 124 of 1,000 babies born alive in 1910 died before their first birthdays, that figure was approximately 10 in 1986.[1] Some of the reasons for this striking achievement are well known and cannot be discounted, such as improvements in sanitation and the elimination of the great epidemics, attributed in large part to the public health profession,[2] and the development of technologies for saving very small premature infants attributed to the medical profession.[3] Less well known are equally significant contributions by the social work profession.

Social work interest in and action against infant mortality in the early part of the twentieth century grew out of a more general activism on behalf of the welfare of children that was perhaps most visible in the fight against child labor and in the settlement house movement. The leaders in this movement, and indeed in the formation of the social work profession, were very involved in the cause, with Florence Kelley, Julia Lathrop, Grace and Edith Abbott, and Jane Addams

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being among the most active and widely known. The purpose of this article is to trace social work's contribution to one of the major health achievements in this century.

Method

I surveyed the *Proceedings of the National Conference of Charities and Correction* (hereafter *Proceedings*) from 1900 through 1979[4] to determine the number of presentations related to infant mortality. The *Proceedings* contained all presentations made at the national conference until the 1950s, after which only selected proceedings were included.[5] Data for individual years were combined into decades to provide more stability; 1979 was thus the last year of the last available decade of data. The National Conference of Charities and Correction was selected because for many years it has been a forum for the professional concerns of social workers and has been described as "the continuing machinery that makes possible this yearly discussion of questions of public or professional interest in the field of social welfare."[6]

I surveyed the index of each volume of the *Proceedings* and read the entries under "infant mortality," "mortality," "deaths," "prenatal care," "maternal," and "mother." The article was included in the tally if the term "infant mortality" or "infant death" appeared in it.

In order to enhance the reliability of this method, I conducted two independent surveys of the literature 6 months apart. A comparison of the two data sets showed the yearly totals to be identical for 74.0 percent and within one for another 19.5 percent, suggesting that the method of categorizing the articles was a reliable one. Figure 1 shows the results of the historical analysis, which are discussed below.

The First Years of Accomplishment

The early years of the century were so rich in social reform that the period is often called the "Progressive Era." Social workers were active during this time in a number of causes that contributed directly and indirectly to reductions in infant mortality. The level of interest by the profession in the subject is demonstrated by the number of professional presentations at the national conference (fig. 1). Presentations during this time were concerned with a variety of subjects, including the excessive mortality in institutionalizations and among black and illegitimate infants.[7] As a means of reducing infant deaths, the presenters recommended breast-feeding to reduce gastroenteritis deaths, and universal birth and death registration to provide a means of monitoring mortality.[8]

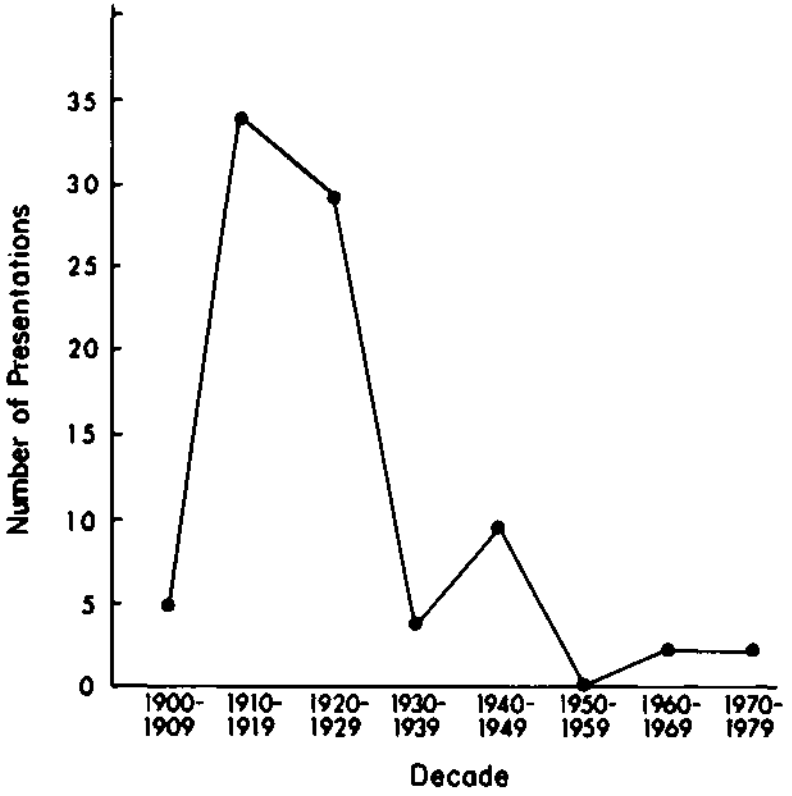

FIG. 1.—References to infant mortality at proceedings, 1900–1979

The Children's Bureau

A major contribution by social work to the reduction of infant mortality during this period was made through the Children's Bureau.[9] The 1912 act creating the Children's Bureau (Public Law 116) specified that its primary function was to "investigate and report" on matters relating to children, and identified infant mortality as the new body's first priority. Social workers, both as professionals and as individuals, deserve much of the credit for selection of both the function and the priority of the bureau and thus its major contribution through research. Indeed, the first five directors of the Children's Bureau were social workers. Julia Lathrop, Grace Abbott, and Katharine Lenroot were the first three directors. Martha May Eliot, the physician who served as the bureau's fourth director, was a medical social worker before she became a physician. Social worker Katherine Oettinger was the fifth director.[10]

Collectively, the profession officially marked its commitment to reducing infant mortality at the 1913 national conference when the

prevention of infant mortality was listed as the first of six major tasks for the profession in child saving.[11] Lewis Meriam, assistant chief of the bureau, noted social work's collective interest: "You, who are familiar with social work, can understand with what unanimity we decided to begin with infant mortality, the first subject specified in the law, and the best single index of social conditions."[12]

Individually, prominent social workers of that time also had demonstrated their concern through direct action, resulting partially from their work with immigrants, among whom infant mortality was especially high. Hull House director Jane Addams was named a director of the American Association for the Study and Prevention of Infant Mortality at the first meeting of the organization in 1911.[13] The Abbott sisters pursued improvement of the lives of immigrants through leadership in the settlement houses and the Illinois Immigrants' Protection League.[14] Grace Abbott also published a study on the problems created by unsanitary and untrained midwives in Chicago[15] and was later to serve as the second director of the Children's Bureau.

Social worker Julia Lathrop's selection as the first director made the research directive of the bureau particularly appropriate. Lathrop came from a tradition of scientific, research-based social work. The Chicago–Hull House group, which included Lathrop, Addams, the Abbott sisters, and others, led a developing faction of the young profession that advocated practice grounded in science.[16] The empirical grounding guided the initial development of the bureau, and from it grew perhaps the greatest contribution of the Children's Bureau and social work to the reduction of infant mortality.

Infant mortality studies.—Between 1912 and 1920, the Children's Bureau carried out infant mortality studies of over 23,000 births in nine different communities that were selected for their diversity and their general representativeness of the entire country.[17] The concern of social workers for immigrants was once again evident in their selection of cities with large immigrant populations and of such study variables as immigrant status, illiteracy, and lack of fluency in English. As Lathrop noted, the studies were "concerned with the economic, social, civic, and family conditions surrounding young babies."[18]

The methodology used in these studies constituted a true innovation that paved the way for subsequent epidemiologic studies in the field. Previously studies simply had counted babies who died within a certain period of time, but the method described by Lathrop[19] involved selection of a 1-year birth cohort and following that cohort for a full year to describe the factors associated with mortality. To overcome incomplete enumeration of deaths in the official records, female interviewers conducted household surveys and questioned midwives and other sources in each city to enumerate undocumented births and deaths. Another innovation was measurement of the reliability of mothers' reports of fathers' earnings, a sophisticated measurement strategy at the time.

The findings of these cohort studies were quite startling at the time and guided the lobbying and policy-making actions of the Children's Bureau over the next 10 years. Results showed that the most important factor in infant mortality was low income, related to immigrant status, poor and crowded housing, maternal ignorance, and maternal employment.[20] Gastroenteritis (diarrhea), often caused by contamination of milk, accounted for about 28 percent of infant deaths and was the most common cause of infant death at the time.[21]

Despite the scientific predilections of social workers and others in the bureau, its goal was not only to publish the results of their studies for the consumption of researchers, but "the subject of infant mortality was selected for the bureau's initial inquiry because it was of fundamental social importance and of popular interest, and could be studied in small units, and the conclusions given to the public as each unit was completed."[22]

Results of the studies were used frequently over the next 10 years to reduce infant mortality in three distinct ways. First, findings of the studies were released to the public immediately and translated into practical advice and education, through written material and conferences. The bureau published a series of informational pamphlets for parents about a wide variety of health and parenting issues, such as prenatal care and infant feeding.[23] Many were published in several languages and widely distributed among immigrants. The bureau also produced study outlines on various aspects of child welfare for the use of organizations in planning local educational programs.[24] Over 11 million of the four most popular pamphlets were distributed, and only the bureau's small printing budget prevented the distribution of more.[25]

In conjunction with the pamphlets, the bureau also scheduled a series of conferences in eight cities across the nation to publicize the findings and other scientific data that would benefit American children.[26] Again, the social workers' scientific approach to infant mortality was evident at the conferences: "Actuated by the faith that the scientific method is the most useful of the tools possessed by the modern world, the organizers of the conferences brought together men and women whose sole purpose was to apply to the service of the American child what has been proved to be incontestably true. Nothing doctrinaire nor anything unsupported by the burden of scientific data now available was admitted."[27]

The second important way that the bureau took action in response to the results of the infant mortality studies was to open milk stations in several cities to distribute milk to mothers who could not breast-feed.[28] The availability of pure milk had been of great concern to many social workers,[29] because for mothers who were forced to work and could not breast-feed (most often poor women), cow's milk was the only substitute for breast milk. It was difficult to keep milk pure

in the summer, especially for the poor, who lacked proper facilities.[30] The milk stations dispensed pure milk either free or at low cost.

At the same time they dispensed milk, the stations served as convenient sites where public health nurses could dispense information and advice concerning infant care and feeding. The importance of these centers can only be appreciated if it is remembered that the context was an urban population that included large numbers of first-generation, non-English-speaking, young, uneducated immigrant mothers. Living in relative isolation and often without extended families to help them with the children, many of these women probably received most of their information and advice about child raising from these centers. Education regarding proper child care had been cited repeatedly at the national conference as an important way of reducing infant mortality.[31]

The 1920s: Policy Recommendations Become Programs

The third great use of the infant mortality studies was as the basis for policy recommendations that were to become major components of the American attack on infant mortality. As many of these recommendations became policy in the 1920s, social workers at the national conference also expressed concern about excessive black infant mortality[32] and continued to advocate breast-feeding.[33]

Perhaps among the most important programs championed by the social workers in the bureau was universal birth registration, the need for which was substantiated by evidence from the cohort studies that many births and infant deaths were not reported. Largely through the lobbying efforts of the Children's Bureau[34] and following repeated calls at the national conference,[35] the national birth registration area was formed in 1915, and by 1933 all states were part of it.[36] Birth registration is now a valuable tool for monitoring the national health over time and comparing the United States' standing with that of other nations.[37]

The second program, Mothers' Aid, grew in part from findings of the cohort studies regarding excess mortality among working mothers who were forced to rely on artificial feeding, and in part from concern about child placement.[38] Investigations by those involved in the child-placement movement showed that artificial feeding of institutionalized infants was a major reason for the appalling mortality (50–100% in some institutions) among institutionalized and illegitimate infants.[39] This knowledge led social workers and other professionals who worked with mothers to advocate breast-feeding as the superior way of nourishing all babies. In addition to the national conference, the widely read social work publication *Survey* carried a number of pro-breast-feeding articles in connection with its interest in infant mortality.[40]

The Children's Bureau's support for Mothers' Aid, then, was as a means of inducing poor mothers to remain at home to breast-feed their infants.

Another policy push based on the pioneer infant mortality studies grew from findings that large numbers of women had no prenatal care, often had either no attendant or only untrained, unlicensed midwives at delivery, and frequently had no access to a nearby hospital if problems did develop during delivery.[41] High neonatal mortality, coupled with the specific causes of death among that group, suggested that lack of prenatal services was a significant factor in neonatal mortality, which had improved very little during the century, despite gradual progress in the reduction of postneonatal mortality.[42]

Social workers were an essential part of the prenatal care process at the time, both in terms of the provision of services and in terms of advocacy for access to such services by the poor.[43] Physician Walter Brown noted that "in prenatal, sick, and well baby clinics much advice given by the doctors would be lost if social service did not adapt it to the intellect and circumstances of the mother."[44] A hospital social worker stated, "In many instances the social worker is in a strategic position to turn the balance favorably by persuading the mother to seek competent prenatal advice and by assisting her in getting it if she is not able to puchase it."[45] A representative of the New York Association for Improving the Condition of the Poor further described social workers' tasks as seeing women at their prenatal consultations, urging the mothers to continue their visits and to breast-feed, providing information about public assistance and budgeting, and assisting with plans for temporary care of other children during confinement.[46]

Dr. J. H. Mason Knox, a well-known pediatrician, emphasized social workers' advocacy role in 1910: "May I suggest that all social workers familiarize themselves with the fact of the large and unnecessary death rate in infants, that they make some phase of this problem a part of their programs in their annual conferences, and that when interest in their community has commenced to be aroused that it be further extended by illustrated lectures and by the formation of study classes."[47]

The Children's Bureau had studied and publicized systems of maternal services in other nations and reported on the vigorous European efforts to lower infant mortality in the face of the terrible destruction and falling birthrate associated with World War I.[48] Irene Andrews of the Children's Bureau deplored the lack of protection of maternity in the United States,[49] while "practically all of the civilized countries, and some which we have not considered entirely civilized, have enacted . . . legislation."[50]

Lathrop first suggested an American system of medical services for mothers and children in 1917. Efforts to effect a federal commitment to provision of maternity services began in 1918 with the introduction

of a Maternity and Infancy Act, also known as the Sheppard-Towner Act. Provisions of the bill were quite limited; Grace Abbott described the overall goals as similar to the themes social workers had been discussing for some time—education of women about good prenatal care and provision of resources for such care, especially in rural areas where resources were scarce.[51]

Despite heated controversy and publicity claiming that the Sheppard-Towner Act would destroy the American family,[52] it took effect in 1921, administered by Grace Abbott in the Children's Bureau. With a small appropriation of just over $1 million, the Act called for a federal partnership with individual states originating the plans of work and the Children's Bureau approving those plans.

It is difficult to estimate how many mothers and infants benefited from Sheppard-Towner before it was allowed to lapse in 1928. In 1931, Grace Abbott reported that the Act was responsible for the establishment of state child-hygiene bureaus in 28 states; the opening of 1,594 permanent local child health, prenatal, or combined prenatal and child health clinics; and the further spread of effective birth and death registration.[53] Over the lifetime of Sheppard-Towner, its provisions were responsible for 183,252 health conferences (now called "well-baby visits"), 3,131,966 home visits, and 22,020,489 pieces of literature distributed. In its last 4 years alone, 4 million babies and 700,000 expectant mothers were served.[54] The *Social Service Review* directly credited declines in infant and maternal mortality to the Sheppard-Towner Act.[55] One major accomplishment of the Act was that it established the precedent of a federal role in the provision of maternal and child health services.[56] The lapse of Sheppard-Towner was decried at the national conference in 1927, the presenter noting that many states would be forced to discontinue maternal and child health (MCH) services due to the loss of this vital funding.[57]

The end of this period thus saw great improvements, as infant mortality stood at 64.6 per 1,000 live births in 1930.[58] The stock market crash of 1929 and the ensuing Great Depression, however, cut off many of the resources available for continued progress for American infants and greatly increased the acute need for such services.[59]

The Depression Years

The greatest threat faced by American infants, and indeed the population at large, during the Great Depression grew from unemployment. It was probably the crisis of unemployment and social work's concern and interest with this great overarching problem that led to an apparent decline of social work interest in infant mortality per se in the 1930s (see fig. 1).[60]

Faced with severe decreases in funds, states initiated budget cuts in welfare and health services for children, and many discontinued their

recently inaugurated Mother's Aid program. Grace Abbott stated that there was "a reckless disregard of obligations which had been assumed in many states."[61] The *New York Times* reported increases in rickets and malnutrition, indicating that over one-seventh of all children were destitute due to their fathers' unemployment.[62] For reasons that are difficult to explain, infant mortality nonetheless continued to decline over this period, from 67.6 in 1929 to 57.1 in 1936,[63] despite fear expressed at the national conference that the rate was rising due to poverty.[64]

Passage of the Social Security Act in 1935 marked a solid federal commitment to mothers and infants. Title V continued the work for mothers and children that had begun with the Sheppard-Towner Act in providing funding to the states for maternity and other services, increased appropriations for the Children's Bureau's infant mortality–related research, and training of health professionals.[65] Social workers such as Katharine Lenroot testified before the President's Committee for Economic Security and the U.S. Senate Committee.[66] In her testimony before the Senate Committee on behalf of Title V, Grace Abbott emphasized the connection between higher rural infant mortality and the lack of health care and educational services in rural areas.[67]

Unfortunately, however, the Social Security Act solidified many of the problems with mothers' pensions (called Aid to Dependent Children, or ADC, under Title IV of the Social Security Act) to which social workers had been actively opposed. The Committee on Economic Security, under the leadership of social worker Frances Perkins and advised by social workers, including Grace Abbott and *Survey* editor Paul Kellogg, had recommended to the president that the ADC program be a social service program administered by the Children's Bureau. For reasons that are not clear,[68] however, the Social Security Act officially designated ADC as a "relief" program under the Federal Emergency Relief Administration, administered by Harry Hopkins.[69]

In addition, under the original concept and in the original Wagner-Lewis Act, aid levels were dependent on budgetary needs only, with no standard or prescribed ceilings. The 1935 act placed ceilings on federal contributions to the plan, allowing great variation in states' contributions and guaranteeing what Grace Abbott called "starvation security to children."[70] Despite problems, the creation of ADC/AFDC at last made assistance available to mothers and children throughout the nation, rather than leaving it to state discretion, and established the precedent of public responsibility for needy children.

World War II

The onset of World War II and the mobilization of millions of servicemen shifted public emphasis from the Depression and posed new problems

for military families. As the armed forces expanded following the passage of the Selective Service and Training Act in 1940, thousands of servicemen moved to military bases throughout the country and their wives followed them, living around bases and in towns that quickly became congested and overwhelmed by large numbers of new residents. Inevitably there was tremendous growth in those areas in the need for obstetrical, hospital, and pediatric care services, which were often simply not available.[71] Social work's concern about the need for MCH services is evident from the national conference presentations.[72]

The first federal response to the crisis came with the emergency use by states of federal maternal and child health funds, with the permission of the Children's Bureau, and later with Congressional appropriations to the Children's Bureau. At the urging of Katharine Lenroot, Congress passed legislation creating and funding the Emergency Maternal and Infant Care (EMIC) program in 1943. The program provided free prenatal, hospital delivery, postnatal, pediatric, and other related services to wives and infants of noncommissioned servicemen, who made up three-fourths of the armed services. Social work services were mandated as an integral part of the program.[73] By the time the program was discontinued in 1945, EMIC had served 1.25 million mothers and 230,000 infants.[74]

In addition to interest in provision of services through EMIC, social work interest in infant mortality extended to concern about the effect of the war on infant mortality worldwide.[75] The American Association of Medical Social Workers (AAMSW) reported in 1943 that infant mortality in the occupied countries of Europe had increased between 20 and 60 percent of prewar levels, that prematurity and miscarriages had doubled, and that starvation was among the leading causes of death.[76] Across the Atlantic, British social workers concerned themselves with rising wartime rates of illegitimate births and elevated mortality rates among these illegitimate babies.[77] Health visitors and the maternity allowance, a subsidy which allowed mothers to remain at home with their newborns rather than seek employment, were prescribed for this problem. In fact, the English infant and maternal mortality rates improved substantially during the war;[78] infant mortality rates in the United States also dropped from 45.3 per thousand in 1941 to 31.3 per thousand in 1949.[79]

Social Work Disinterest in the 1950s

Figure 1 demonstrates the almost total lack of interest in infant mortality during the 1950s, as evidenced by the dearth of presentations at the national conference. Volumes of the *Social Work Yearbook* during the decade also document the lack of interest at the time. The 1951 and 1954 volumes contain topical articles on maternal and child health

(MCH), which were authored by a physician.[80] Both note contributions to the improving health of mothers and children by a long list of contributing professions but do not include social work among them. The 1957 volume omitted the MCH article altogether, substituting brief references to the Children's Bureau in other sections, and in none of these volumes is the decisive leadership of social work in the creation of the Children's Bureau or in other areas emphasized.

The apparent lack of interest in MCH issues by the social work profession during the 1950s may be due to a number of factors. The first is an essential change in the focus of the social work profession itself, which had begun in the 1930s. Increased specialization and preoccupation with psychotherapy and individual casework by the profession reached a peak during the 1950s and probably influenced social workers to abandon social causes.[81]

But in addition to professional trends, the political climate of the 1950s was not supportive of social change. Political scientist Henry Aaron notes that "if poverty was not a problem in the eyes of the public, it was equally ignored by scholars."[82] Social workers and social work scholars are, after all, a part of and influenced by the larger society. Apparently the mood of plenty and optimism during this period of economic growth[83] did not predispose the social work profession to abandon its interest in direct casework to fight a cause that did not appear to be acute, despite the fact that infant mortality remained a problem during the 1950s.

In fact, after many years of steady decline, infant mortality leveled off during the 1950s, and both the gap between rich and poor and the variation in infant mortality rates among states actually increased.[84] White infant mortality rates in 1950, 1955, and 1960 stood at 26.8, 23.6, and 22.9 per thousand, respectively, while the nonwhite rates for the same years were 44.5, 42.8, and 43.2 per thousand.[85] Thus, rates of decrease during the decade were 14.6 percent for white infants and only 2.9 percent for nonwhite infants, and in 1960 black infants remained nearly twice as likely to die before reaching 1 year of age.

Amendments to Title V of the Social Security Act in the 1960s created Children and Youth (C & Y) programs, which provided health care and auxiliary services to low-income children, and Maternity and Infancy Care (MIC) programs, which established comprehensive maternity and pediatric clinics in areas with large numbers of low-income families. Funding was also allocated for intensive newborn care, especially for low-income families. In 1969, the responsibility for administration of Title V was moved from the Children's Bureau to a special office in the Department of Health, Education, and Welfare.

A slight increase in interest in infant mortality appeared in the 1960s (see fig. 1), but social work interest apparently did not rise as substantially as one might expect given involvement in the War on Poverty.[86] The

small number of presentations at the national conference concerned health-related legislation, poverty and its relationship to the nation's unfavorable world standing in infant mortality, and calls for improvement in the health of mothers and infants.[87]

The profession's interest in prenatal care and low birth weight in the 1960s related largely to the prevention of mental retardation, a public objective championed by President Kennedy.[88] The *NASW News*, newsletter of the National Association of Social Workers, reported on amendments to Title V that provided funds for prenatal care and other medical services "designed to help reduce the incidence of mental retardation."[89] Title V's original, more general goal of better infant health and reduced mortality was not discussed.

In 1966, Adelphi University sponsored a conference which, history notwithstanding, claimed to be "the first systematic effort by social work to examine the problem of infant mortality and morbidity from the point of view of contributing social factors, and the first of its kind to follow the forward-looking Maternal and Child Health and Mental Retardation Planning Amendments of 1963."[90]

At that Adelphi conference, Virginia Insley, a prominent social worker and federal MCH official, discussed the provisions of Title V, explaining that the MIC projects included medical, public health nursing, nutrition, and social work services. She stressed direct service by social workers in recruiting mothers into prenatal care and in coordinating with other agencies to ensure that pregnant women also had adquate shelter and food in addition to medical care.[91] The important role of social workers in forming national policy also was emphasized.[92]

Given the history of the social work profession's advocacy for infant survival and the apparent lesser interest from other quarters in the issue of infant mortality,[93] it is curious that the national conference does not reflect more social work involvement in the issue in the 1960s and 1970s. It is possible that the number of presentations related to infant mortality is not as good an indicator of social work interest in the topic as it was earlier due to the inclusion after that period of only selected presentations.[94] Disinterest at the national conference also may lie in the perception of infant mortality as a medical problem, a perception that has become widespread and has been reinforced by the advent of neonatal intensive care technology, which has been associated with an impressive decline in mortality among low birth weight and premature infants in the last 2 decades.[95] Thus more and more sophisticated medicine and technology may be the preferred method of reducing mortality, while social factors are given lower priority.

It cannot be determined yet whether social work interest and leadership in infant mortality will grow substantially in the 1980s, but since the 1970s there have been new roles for social workers to play in the

fight against the unnecessary deaths of infants. The 1974 and 1977 editions of the *Encyclopedia of Social Work* (descendant of the *Social Work Yearbook*) detail the role of social workers in MCH. The history of social work in MCH programs is briefly described, and social work tasks and expertise in the area are discussed.[96] The 1987 *Encyclopedia* contains no article specifically on maternal and child health or infant mortality, but makes several references to these issues in other articles.[97]

Literature from various sources during the 1980s documents growing social work involvement in the fight against infant mortality,[98] perhaps in part due to the increasing sophistication of medical technology. One indicator of greater interest is the creation of the National Association of Perinatal Social Workers in 1974 and the group's growth in membership and influence since that time.[99] The future should see greater social work involvement in MCH, for technology seems to have reached the limits of its ability to save the smallest infants. It has become clear that the most efficient and humane goal is not simply to attempt to save extremely premature infants, many of whom survive with severe handicaps, but rather the reduction of high rates of low birth weight and prematurity, which are correlated with poverty and its many effects.[100] Clearly such factors as inadequate income, lack of access to needed medical care and other services, teen-aged and unwed pregnancy, and other social factors closely related to infant mortality are within the domain of the social work profession.

In addition, three serious social problems that have developed only recently are of concern to social workers and are seriously affecting infant health and may dictate greater leadership by social work in the infant mortality fight. They are the acquired immune deficiency syndrome (AIDS) epidemic, which is growing among infants who contract the disease in utero;[101] fetal alcohol syndrome, which is associated with maternal alcohol consumption during pregnancy;[102] and the growing number of infants born addicted to drugs.[103] There is no reason at the current time to believe that these social problems will abate in the next few years or that their deleterious effects on infant health will be reduced.

Discussion

Social work's early contribution to the reduction in infant mortality certainly came about largely through the profession's leadership in the U.S. Children's Bureau. Over the years the Children's Bureau has contributed many important research studies, over 100 during Grace Abbott's tenure as director alone.[104] Studies were done on maternal mortality, neonatal mortality, and civic efforts to improve infant and maternal health.[105] Beginning in 1960 the Children's Bureau was authorized to fund outside agencies to conduct research in the areas

of child welfare, maternal and child health, and crippled children's services.[106]

Likewise, the great programs that have been influential in improving the health and survival of infants have come about in part due to the leadership of social workers. The Sheppard-Towner Act set a precedent of federal services to mothers and children that continues in the form of valuable Title V programs that provide medical care and auxiliary services to millions of poor mothers and children today. While the Aid to Families with Dependent Children program remains an expensive and unpopular program, it has provided subsistence to millions of mothers and children who might have faced total destitution, more serious health problems, and increased risk of mortality.

While the tremendous drop in infant mortality during this century certainly cannot be attributed solely to the work of the Children's Bureau or to social work, the research findings and public attention to the issue due to the bureau and the dedication of social workers undoubtedly played a major part in the successful commitment of this nation to the reduction of infant mortality. Grace Abbott noted great progress in 1931 and modestly declared: "The Children's Bureau does not claim credit for these changes. It can, however, be said that its investigations furnished the facts on which action was frequently based, and through the cooperation of experts in child welfare, public and private child-caring agencies, and women's organizations, the bureau has been able to focus national attention on some of the most important aspects of child care."[107]

The great success of the social work profession in the endeavors described here emerged from high-quality research that established the boundaries of the problem, its causes, and possible solutions; public information that took the case to the public and to those with power and authority; and integration of service with these functions. Chambers described Grace Abbott as "empirical of mind, compassionate of spirit, candid in manner, direct in action,"[108] and these characteristics certainly served her and her colleagues well in their pursuit of better health for American mothers and babies.

Now, despite meaningful and effective action by some groups, such as the Children's Defense Fund, it appears that the social work profession might be content to leave the question of infant mortality to public health and medicine, two professions that have made major contributions in the past. There is evidence, however, that these two professions may have reached the zenith of their contributions. Until the tragic spread of AIDS, the great epidemics had all but disappeared in this country, and public health measures have cleaned up the water and milk so that infant deaths due to infectious disease in this country are now quite rare. Neonatal medicine has accomplished a great deal, especially in the last 20 years, to save smaller and smaller infants. It

is not uncommon now for sophisticated NICU centers to save infants born after as little as 26 weeks of gestation and weighing as little as 1 pound. Most experts agree, however, that technology probably can do little more to save smaller and less developed infants, and that future efforts should go toward preventing premature birth in the first place.[109]

Social work leadership in such efforts would be entirely appropriate, as the causes of infant death in the 1980s are directly in the domain of the profession. Black infants are twice as likely to die as whites;[110] racism, unequal opportunity, and the suffering of disadvantaged children have always been of concern to the social work profession. Poverty is a major professional arena, and poverty plays a significant role in the deaths of infants.[111] Recent reductions in health services and social programs, followed by evidence that infant mortality may be beginning to creep back up instead of down in some areas,[112] cannot be ignored by the profession that has done so much in this area before. All this occurs when child welfare has moved down in the list of priorities for funding in the federal budget.[113]

Effective action by social workers will demand that social workers learn from Julia Lathrop and her distinguished colleagues. The weapons in the fight must be theirs: high-quality research to demonstrate the extent and correlates of the problem, social reform to see that policies and programs are in place, and competent direct practice that is based on scientific data. As Chambers stated, "tested pragmatically, social-welfare-as-social-reform worked."[114] Some social work scholars would contend that with the end of the Progessive Era came the end of social work leadership in social reform,[115] but with the time-tested strategies of these great leaders, social work once again can achieve greater health for mothers and children.

Notes

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1. See Emma Duke, *Infant Mortality: Results of a Field Study in Johnstown, Pa., Based on Births in One Calendar Year*, U.S. Department of Labor, Children's Bureau, Infant Mortality Series no. 3 (1915); and Myron Wegman, "Annual Summary of Vital Statistics 1984," *Pediatrics* 76 (1985): 861–71.

2. See C.-E. A. Winslow, *The Evolution and Significance of the Modern Public Health Campaign*. (1923; reprint, New Haven, Conn.: Yale University Press, 1984).

3. Marie McCormick, "The Contribution of Low Birth Weight to Infant Mortality and Childhood Morbidity," *New England Journal of Medicine* 312 (January 10, 1985): 82–90.

4. The name of this organization has changed several times. From 1874 to 1881, while the group was part of the American Social Science Association, it was called the Conference of Charities. From 1882 to 1883, it was called the National Conference of Charities and Corrections, and from 1884 to 1917 the National Conference of Charities and Correction. In 1917 the name was changed to the National Association of Social

Work, and again in 1956 to the National Conference on Social Welfare.

5. Frank J. Bruno, *Trends in Social Work 1874–1956: A History Based on the Proceedings of the National Conference of Social Work* (New York: Columbia University Press, 1957).

6. Ibid., p. 367.

7. For example, see the following articles from *Proceedings:* Jacob H. Hollander, "Reports from States—Maryland," 30 (1903): 57–60; Beverly Warner, "The Negro's Outlook for Health," 35 (1908): 123–34; J. H. Mason Knox, "The Claim of the Baby," 37 (1910): 116–23; Kate W. Barrett, "The Unmarried Mother and Her Child," 37 (1910): 96–100; George W. Goler, "Medical School Inspection—a Way to Child Welfare," 38 (1911): 98–103; Philip Van Ingen, "Infant Mortality in Institutions," 42 (1915): 126–31; Grace L. Meigs, "Infant Welfare Work in War Time," 44 (1917): 192–206; C. C. Jones, "A Tentative Outline for a Study on Illegitimacy," 45 (1918): 91–94.

8. Hollander; see the following articles from *Proceedings:* Charles R. Henderson, "Physical Study of Children," 34 (1907): 251–55; Barrett; "Report of the Subcommittee on Infant Mortality," 39 (1912): 322–26; Van Ingen; Meigs; Julius Levy, "The Reduction of Infant Mortality by Economic Adjustment and by Health Education," 46 (1919): 202–7; Knox; William T. Cross, "Unity in Child-helping Service," 40 (1913): 302–5; C. F. Davidson, "Discussion," 40 (1913): 180–82; C. C. Carstens, "Report of the Committee: A Community Plan in Children's Work," 42 (1915): 92–106.

9. A fascinating, detailed account of the role of social work in the founding of the Children's Bureau and in the bureau's work can be found in Jacqueline K. Parker and Edward M. Carpenter, "Julia Lathrop and the Children's Bureau: The Emergence of an Institution," *Social Service Review* 55 (1981): 60–77.

10. Vince L. Hutchins, "Celebrating a Partnership: Social Work and Maternal and Child Health," in *Public Health Social Work in Maternal and Child Health: A Forward Plan,* ed. Alex Gitterman, Rita B. Black, and Florence Stein (report of a working conference of the Public Health Advisory Committee for the Bureau of Health Care Delivery and Assistance, sponsored by the Columbia University School of Social Work, 1985), pp. 3–12.

11. Cross.

12. Lewis Meriam, "The Aims and Objects of the Federal Children's Bureau," *Proceedings* 40 (1913): 317–24, quote on pp. 319–20.

13. *Transactions of the First Annual Meeting of the Association for the Study and Prevention of Infant Mortality, November 9–11, 1911* (reprint, New York: Arno Press, Children and Youth Series, 1974).

14. Robert L. Buroker, "From Voluntary Association to Welfare State: The Illinois Immigrants' Protective League, 1908–1926," *Journal of American History* 58 (1971): 643–60.

15. Grace Abbott, "The Midwife in Chicago," *American Journal of Sociology* 20 (1915): 684–99.

16. James Leiby, *A History of Social Welfare and Social Work in the United States* (New York: Columbia University Press, 1978).

17. Reports on the studies were published in a series beginning with Duke (n. 1 above). The studies are summarized in Julia C. Lathrop, "Income and Infant Mortality," *American Journal of Public Health* 9 (1919): 270–74.

18. Lathrop, "Income and Infant Mortality," p. 270.

19. Ibid.

20. Anna Rochester, "Infant Mortality as an Economic Problem," *Proceedings* 46 (1919): 197–202.

21. Edward T. Devine, "The Waste of Infant Life," *Survey* 23 (1909): 314–20.

22. Grace Abbott, "The Children's Bureau . . . What It Is and How It Works," *Medical Women's Journal* 38 (1931): 55–59, quote on p. 56.

23. See, e.g., Mrs. Max West's two pamphlets, *Infant Care,* Children's Bureau, Care of Children Series no. 2 (1914), and *Prenatal Care,* Children's Bureau, Care of Children Series no. 1 (1915).

24. Children's Bureau, *Child-Welfare Programs: Study Outlines for the Use of Clubs and Classes,* U.S. Department of Labor, Children's Bureau, Children's Year Follow-up Series no. 7, Bureau Publication no. 73 (1920).

25. G. Abbott, "The Children's Bureau" (n. 22 above).

26. See two Children's Bureau publications: *Standards of Child Welfare: A Report of the*

Children's Bureau Conferences May and June, 1919, Conference Series no. 1, Bureau Publication no. 60 (1919), and *Child-Welfare Programs: Study Outlines for the Use of Clubs and Classes* (n. 24 above).

27. Children's Bureau, *Standards of Child Welfare*, p. 12.

28. Etta Goodwin, *A Tabular Statement of Infant-Welfare Work by Public and Private Agencies in the United States*, U.S. Department of Labor, Children's Bureau, Infant Mortality Series no. 5, Bureau Publication no. 16 (1916).

29. For example, Henderson (n. 8 above); Alfred T. White, "A Life-saving Quest on the Sea of Infant Mortality Statistics," *Survey* 23 (1910): 877–84; Goler (n. 7 above); "Report of the Subcommittee on Infant Mortality" (n. 8 above); Davidson (n. 8 above); Meriam (n. 12 above); John A. Kingsbury, "Coordination of Official and Private Activity in Public Health Work," *Proceedings* 40 (1913): 169–73; Franz Schneider, "The Apportionment of the Health Budget," *Proceedings* 44 (1917): 241–45.

30. Knox (n. 7 above).

31. Henderson (n. 8 above); Knox (n. 7 above); Wilbur C. Phillips, "Community Planning for Infant Welfare Work," *Proceedings* 39 (1912): 40–48; "Report of the Subcommittee on Infant Mortality" (n. 8 above); Julia C. Lathrop, "State Care for Mothers and Infants," *Proceedings* 45 (1918): 389–92; Levy (n. 8 above).

32. The following are from *Proceedings:* Forrester B. Washington, "Health Work for Negro Children," 52 (1925): 226–31; Charles S. Johnson, "Negro Health in the Light of Vital Statistics," 55 (1928): 173–75; Eugene K. Jones, "The Negro in Community Life," 56 (1929): 388–98, and "The Negro's Struggle for Health," 50 (1923): 68–72.

33. The following are from *Proceedings:* W. S. Rankin, "The Unoccupied Fields of Health Promotion and Disease Prevention," 50 (1923): 36–39; Elizabeth Gardiner, "A Maternity and Infancy Program for Rural and Semi-Rural Communities," 53 (1926): 396–99; Howard W. Green, "Prenatal Instruction," 54 (1927): 193–94; Mary W. Taylor, "Applying a Maternity and Infancy Program to Rural Sections," 55 (1928): 208–13.

34. Archie Hanlan, "From Social Reform to Social Security: The Separation of ADC and Child Welfare," *Child Welfare* 45 (1966): 493–500.

35. Henderson; Knox; Cross; Davidson; Carstens, "Report of the Committee" (n. 8 above).

36. U.S. Department of Health, Education, and Welfare, "History and Organization of the Vital Statistics System," in *Vital Statistics of the United States*, vol. 1 (1950), reprinted 1978.

37. Joel C. Kleinman, "Infant Mortality," in *Statistical Notes for Health Planners* (National Center for Health Statistics, no. 2, 1976).

38. Even before results of the studies were issued, there had been support among social workers for mothers' aid, widows' pensions, or mothers' pensions, due to desires not to remove children from their own homes and place them in institutions solely because of poverty. At the 1909 Conference on the Care of Dependent Children (Conference on the Care of Dependent Children, *Proceedings of a Conference Held in Washington, D.C., January 25 and 26, 1909* [Washington, D.C.: Senate document, 60th Cong., volume 13]) there was almost universal agreement that children should not be removed from their own homes except for extremely serious reasons, and financial aid to destitute single mothers was seen as a means of avoiding many placements. It should be noted, however, that there was not consensus within the social work community about mothers' aid. In fact, Grace Abbott described a "storm of controversy" among social workers when Illinois passed its first mothers' aid law (see Grace Abbott, *From Relief to Social Security* [Chicago: University of Chicago Press, 1941], p. 265). One large constituency, including Mary Richmond and Edward T. Devine, director of the New York School of Social Welfare, was very much against the idea, and C. C. Carstens, secretary of the Massachusetts Society for Prevention of Cruelty to Children and later director of the Child Welfare League of America, recommended that every possible private source should be tapped before public funds were used for mothers' aid (C. C. Carstens, *Public Pensions to Widows with Children* [New York: Russell Sage Foundation, 1913]).

39. Hollander (n. 7 above); Barrett (n. 7 above); Homer Folks, "Presidential Address: The Rate of Progress," *Proceedings* 38 (1911): 1–8; Van Ingen (n. 7 above).

40. For example, Hastings H. Hart, "Destruction of Human Life," *Survey* 23 (1910): 689; Gertrude B. Knipp, "Infant Welfare," *Survey* 37 (1916–17): 358.

41. Grace Abbott, "Administration of the Sheppard-Towner Act: Plans for Maternal

Care," *Transactions of the Annual Meeting of the American Child Hygiene Association* 13 (1922): 194–201.

42. Richard A. Bolt, *Causes and Prevention of Neonatal Mortality* (U.S. Department of Labor, Children's Bureau, 1929).

43. The following are from *Proceedings:* Ada E. Schweitzer, "Child Health Work: What State Divisions of Child Hygiene Are Doing to Promote Child Health," 48 (1921): 175–79; Marguerite Noufflard, "The Development of Hospital Social Service in France," 50 (1923): 30–36; Rankin (n. 33 above); Walter H. Brown, "Transition from Negative to Positive," 50 (1923): 170–73.

44. E. Baker, "The Contribution of Hospital Social Service Health Conservation," *Proceedings* 50 (1923): 27–30.

45. H. E. Kleinschmidt, "What Should Social Agencies Do for the Health of Children under Their Supervision in Institutions and in Their Own Homes? Minimum Health Requirements for Dependent Children," *Proceedings* 54 (1927): 205–11, quote on pp. 206–7.

46. John C. Gebhart, "Mulberry Health Center Demonstration," *Proceedings* 32 (1923): 44–45.

47. Knox (n. 7 above), p. 122.

48. Henry J. Harris, *Maternity Benefit Systems in Certain Foreign Countries*, U.S. Department of Labor, Children's Bureau, Legal Series no. 3, Bureau Publication no. 57, 1919); Meigs (n. 7 above); Julia Lathrop, "Presidential Address," *Proceedings* 46 (1919): 5–9.

49. Irene O. Andrews, "State Legislation for Maternity Protection," *American Labor Legislation Review* 11 (1921): 80–84.

50. Irene O. Andrews, "The Protection of Maternity an Urgent Need," *Social Service Review* 10 (1920): 47–50, quote on p. 48.

51. G. Abbott, "Administration of the Sheppard-Towner" (n. 41 above).

52. For examples and details on the vitriolic national debate over passage of the Sheppard-Towner Act and the role of the social work profession in that debate, see Kristine Siefert, "An Exemplar of Primary Prevention in Social Work: The Sheppard-Towner Act of 1921," *Social Work in Health Care* 9 (1983): 87–103.

53. Grace Abbott, "The Children's Bureau" (n. 22 above).

54. J. Stanley Lemons, "The Sheppard-Towner Act: Progessivism in the 1920s," *Journal of American History* 55 (1969): 776–86.

55. "Editorial," *Social Service Review* 2 (1928): 654–55.

56. Martha M. Eliot, "The Children's Bureau: Fifty Years of Public Responsibility for Action in Behalf of Children," *American Journal of Public Health* 52 (1962): 576–91.

57. Taylor (n. 33 above).

58. Grace Abbott, *From Relief to Social Security* (Chicago: University of Chicago Press, 1941).

59. Russell H. Kurtz, "Social Case Work in a National Program of Social Security," *The Family* 16 (1935): 163–69.

60. The interest of social work in unemployment from 1921 to 1933 is documented in Bruno (n. 5 above). Further documentation of increased social work interest in unemployment can be seen in the growth of the number of articles under "unemployment" in the national conference indices between 1910 and 1919 (25 articles) and 1920 and 1929 (23 articles), on the one hand, and between 1930 and 1939 (74 articles) on the other hand.

61. G. Abbott, *From Relief to Security*, pp. 24–25.

62. "Grace Abbott Finds in Undernourishment, Delinquency, and Loss of Homes a Menace to Be Met by Greater Relief Efforts," *New York Times* (December 18, 1932), sec. 9, p. 5; reprinted in G. Abbott, *From Relief to Social Security* as "Children and the Depression."

63. U.S. Department of Health, Education, and Welfare, *Child Health in America* (DHEW Publication no. [HSA] 76-5015, 1976).

64. Aubrey Williams, "Organization for Social and Economic Security in the United States," *Proceedings* 62 (1935): 457–65.

65. Edith Abbott, "Grace Abbott: A Sister's Memories," *Social Service Review* 13 (1939): 351–407.

66. See the account of Edwin E. Witte, executive director of the committee, 1934–1935, *The Development of the Social Security Act* (Madison: University of Wisconsin Press, 1963).

67. See "The Beginnings of the Social Security Act," in G. Abbott, *From Relief to Social Security.*

68. It may have been due in part to the influence of one-time social worker Harry Hopkins, who favored administration by the powerful Social Security Board and was politically influential in the Roosevelt Administration (see Hanlan [n. 34 above]).

69. The matter of separation of services and income maintenance has reemerged several times since 1935 and remains a controversial one. For example, see Irving Piliavin and Alan Gross, "The Effects of Separation of Services and Income Maintenance on AFDC recipients," *Social Service Review* 51 (1977): 389–406.

70. Abbott, *From Relief to Security*, p. 284.

71. Nathan Sinai and Odin W. Anderson, *EMIC (Emergency Maternity and Infant Care)* (1948; reprint, New York: Arno, 1974).

72. From *Proceedings:* George St. J. Perrott, "Health and Medical Services under Existing Federal-State Programs," 67 (1940): 213–22; Floyd W. Reeves, "The Youth Problem—a Challenge to Democracy," 67 (1940): 71–83; Leonard W. Mayo, "The Findings of the National Commission on Children and Youth," 73 (1946): 371–78; Allan M. Butler, "Medicine at the Crossroads," 75 (1948): 173–82.

73. American Association of Medical Social Workers (AAMSW), "EMIC Program," *American Association of Social Workers Bulletin* (1943), pp. 55–56; Virginia Insley, "Maternal and Child Health," in *Encyclopedia of Social Work*, ed. Robert Morris (New York: National Association of Social Workers, 1971), pp. 552–60.

74. William Schmidt and Helen M. Wallace, "The Development of Health Services for Mothers and Children in the United States," in *Maternal and Child Health Practices: Problems, Resources, and Methods of Delivery*, ed. Helen Wallace et al., 2d ed. (New York: Wiley, 1982).

75. I. S. Falk, "Mobilizing for Health Security," *Proceedings* 69 (1942): 200–209; Robert E. Bondy, "Special Welfare Services to Families of Men in Service," *Proceedings* 70 (1943): 76–84.

76. AAMSW.

77. Sheila Ferguson and Hilde Fitzgerald, *History of the Second World War United Kingdom Civil Series: Studies in the Social Services* (London: Her Majesty's Stationery Office, 1954).

78. Ibid.

79. U.S. Department of Health, Education, and Welfare (n. 63 above).

80. A. L. Van Horn, "Maternal and Child Health," in *The Social Work Yearbook*, ed. Margaret B. Hodges (New York: American Association of Social Workers, 1951), pp. 299–302; Jessie M. Bierman, "Maternal and Child Health," in Russell H. Kurtz, ed., *The Social Work Yearbook*, ed. Russell H. Kurtz (New York: American Association of Social Workers, 1954), pp. 323–27.

81. See Leiby (n. 16 above), chap. 14, and Clarke Chambers, "Social Service and Social Reform: A Historical Essay," *Social Service Review* 37 (1963): 76–90, for a discussion of the directions of the profession and concentrations on direct casework at this time.

82. Henry J. Aaron, *Politics and the Professors: The Great Society in Perspective* (Washington, D.C.: Brookings Institution, 1978), p. 17.

83. Leiby (n. 16 above).

84. Eliot (n. 56 above).

85. Karen Davis and Cathy Schoen, *Health and the War on Poverty: A Ten-Year Appraisal* (Washington, D.C.: Brookings Institution, 1978).

86. A cursory review of the *NASW News* during the 1960s shows many references in support of War on Poverty programs.

87. Wilbur J. Cohen, "Medical Care Legislations," *Proceedings* 88 (1961): 114–27; Ellen Winston, "The Contribution of Welfare to Economic Growth," *Proceedings* 93 (1966): 3–24.

88. Arthur J. Lesser, "Concepts and Content of Maternal and Infant Care Projects from a National Viewpoint," *American Journal of Public Health* 56 (1966): 725–33; Eliot (n. 56 above).

89. *NASW News* 9 (1963): 4.

90. Beulah Rothman, in *Mothers-at-Risk: The Role of Social Work in Prevention of Morbidity in Infants of Socially Disadvantaged Mothers*, ed. Florence Haselkorn; based on an institute sponsored by Adelphi University School of Social Work (1966), p. 5.

91. Virginia Insley, "Some Implications of Recent Legislation for Social Work," in

Haselkorn, ed., pp. 48–59.

92. Vera Shlakman, "Social Policy and Provision: Issues and Opportunities," in Haselkorn, ed., pp. 60–80.

93. The *NASW News* of August 1962 (vol. 7, p. 31) recommended "further development of health services for mothers and children," including both prevention and treatment.

94. Bruno (n. 5 above).

95. McCormick (n. 3 above).

96. Both articles are by Virginia Insley: "Maternal and Child Health" (n. 73 above), and "Maternal and Child Health," in *Encyclopedia of Social Work*, ed. John Turner (New York: National Association of Social Workers, 1977), pp. 602–11.

97. All in Jacqueline M. Atkins, Executive Editor, *Encyclopedia of Social Work*, 18th ed. (Silver Spring, Md.: National Association of Social Workers, 1987). The relevant articles include: "Blacks," by Harriette Pipes MacAdoo (vol. 1, pp. 194–206); "Children," by Jeanne M. Giovannoni (vol. 1, pp. 242–54); "Migrant and Seasonal Farm Workers," by Juan Ramos and Celia Torres (vol. 2, pp. 148–54).

98. See, e.g., Terri Combs-Orme, "Infant Mortality: Priority for Social Work," *Social Work* (in press); and C. Eddie Palmer and Dorinda N. Noble, "Premature Death: Dilemmas of Infant Mortality," *Social Casework* 67 (1986): 332–39.

99. The National Association of Perinatal Social Workers claimed 412 members in 1986 (see "Committee Reports: Membership," *NAPSW Forum* 6 [1986]: 4).

100. Institute of Medicine, *Preventing Low Birthweight* (Washington, D.C.: National Academy Press, 1985).

101. See Gary R. Anderson, "Children and AIDS: Implications for Child Welfare," *Child Welfare* 63 (1984): 62–73.

102. For example, see Janet M. Wright, "Fetal Alcohol Syndrome: The Social Work Connection," *Health and Social Work* 6 (1981): 5–10.

103. Rita Melvin, "Infant Abuse and Neglect—an Overview," *NAPSW Forum* 6 (1986): 1, 3–6; Mary S. Lawson and Geraldine S. Wilson, "Addiction and Pregnancy: Two Lives in Crisis," *Social Work in Health Care* 4 (1979): 445–57.

104. Edith Abbott (n. 65 above).

105. Grace Meigs, *Maternal Mortality from All Conditions Connected with Childbirth in the United States and Certain Other Countries*, U.S. Department of Labor, Children's Bureau, Miscellaneous Series no. 6, Bureau Publication no. 19 (1917); Richard A. Bolt, "A National Program for Maternity Aid," *American Labor Legislation Review* 11 (1929): 61–65; Children's Bureau, *Baby-saving Campaigns*, U.S. Department of Labor, Children's Bureau, Infant Mortality Series 1, Bureau Publication no. 3 (1913).

106. Jessie M. Bierman, "Advocacy and Inquiry: Their Roles in Development of Health Services for Mothers and Children," *American Journal of Public Health* 56 (1966): 720–25.

107. G. Abbott, "The Children's Bureau" (n. 22 above), p. 59.

108. Clarke Chambers, *Seedtime of Reform: American Social Service and Social Action, 1918–1933* (Minneapolis: University of Minnesota Press, 1963), p. 57.

109. Institute of Medicine.

110. Since the gap in mortality between black and white infants was noted for the first time using relatively complete birth and death registration data in 1918, that gap has actually widened. See Louise Doss-Martin and Kristine Siefert, "A Study of Factors Associated with Black Infant Mortality," in *Families at Risk: A Public Health Social Work Perspective*, ed. Gerald C. St. Denis and Christine L. Young (based on a workshop sponsored by the School of Social Work, University of Pittsburgh, March 24–27, 1985), pp. 84–99; John E. Schwarz, *America's Hidden Success: A Reassessment of Twenty Years of Public Policy* (New York: Norton, 1983); Wegman (n. 1 above).

111. Barbara Starfield, "Postneonatal Mortality," *Annual Reviews in Public Health* 6 (1985): 21–40.

112. C. Arden Miller, "Infant Mortality in the U.S.," *Scientific American* 253 (1985): 31–37.

113. J. G. Hopps, "Editorial," *Social Work* 31 (1986): 163–64.

114. Chambers (n. 81 above), p. 80.

115. Hanlan (n. 34 above); Eleanor L. Brilliant, "Social Work Leadership: A Missing Ingredient?" *Social Work* 31 (1986): 325–31.