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Mortality Rate in the United States

A country's infant mortality rate is often an indicator of the health status of its population. William Nersesian states that "The infant mortality rate is generally recognized as a barometer for the extent of economic and medical development in a country and how equitably all citizens share in that development" (Nersesian 373). The postneonatal mortality rate, which includes the period between the first 28 days and the end of the first year of life, reflects the quality of health care and the health care system in general. This includes biological and genetic factors, the quality of pregnancies, and the occurrence of low birth weight babies. It also reflects housing, sanitation, adequacy of nutrition, and other environmental factors. The postneonatal mortality rate is most affected by differences in care based on social disparities (Hogue and Hargraves 10). Since the turn of the century, the infant mortality rate as a whole has decreased steadily in the United States due to improved socioeconomic status, housing, and nutrition, immunizations, clean water and pasteurized milk, antibiotics, better prenatal care and delivery, and technological breakthroughs in infant care (Nersesian 362). However, the infant mortality rate, and particularly the postneonatal infant mortality rate, remains much higher than that of many other countries. The United States definitely needs to find ways to reduce it and to improve the health of American infants.

In 1991, the United States ranked 21 in total infant mortality rate among nations with populations of at least 2.5 million. Many people think the United States cannot be compared to these other countries because of the large minority and racial differences and economic conditions in the United States. However, of the 20 countries with infant mortality rates lower than that of the United States, only seven have a higher GNP per capita than the United States. Finland, Sweden, Norway, Netherlands, Germany, Switzerland, and Japan all have GNPs from \$22,080-\$32,680. The other thirteen countries have GNPs lower than the United States' GNP of \$21,790. The United Kingdom, for example, has a GNP of \$16,700, which is 24 % less than that of the United States, and the UK has growing minority and racial problems. However, the United Kingdom is 13th in infant mortality rate. Even Sweden has class differences, which will be examined later (Wegman 753-54). Therefore, the United States can and should be compared to these other nations.

The causes of infant death are both biological and environmental in origin. The leading causes of death in the first year of life in the United States for the all-races category are congenital anomalies, SIDS (Sudden Infant Death Syndrome), disorders related to short gestational period and low birth rate, respiratory distress syndrome, pneumonia and influenza, and accidents. The leading causes of death for the postneonatal period are SIDS, congenital anomalies, accidents, pneumonia and influenza. In order to exclude genetic or biological factors and to concentrate instead on environmental factors, the "preventable" postneonatal mortality rate is most often studied. To do so, deaths caused by congenital anomalies are excluded, and only normal birthweight infants are

included in studies. When this is done, the United States has a lower “preventable” postneonatal mortality rate than Denmark, England, Wales, and Scotland, but it is higher than that of Sweden (as well as many other countries). In the United States (as well as Denmark, Norway, England, Wales, and Scotland), congenital anomalies cause between 21-25% of postneonatal deaths (and the “preventable” postneonatal deaths are therefore responsible for 75% of the total). In Sweden, however, congenital anomalies cause 33% of postneonatal deaths (only 66% are “preventable”) because the Swedish are better at preventing respiratory and intestinal infections (Kleinman and Kiely 1091-2).

Other countries are progressing in alleviating the problem of postneonatal mortality at a much faster rate than the United States. In 1950, the postneonatal infant mortality rate in the United States was 8.7 deaths per 1000 live births, which placed the United States third among industrialized nations. Sweden was first in the same year, with a postneonatal infant mortality rate of 5.7 deaths per 1000 live births. By 1986, the United States had moved to sixteenth with a rate of 3.6 and Sweden was second with a rate of 2.0. In the same year, if low birthweight infants are excluded and only infants born weighing over 2500 grams are included, the United States had a postneonatal infant mortality rate of 2.06 and Sweden had one of 1.15. Therefore, the United States is falling behind, and appears to be continuing to decline (Kleinman and Kiely 1091-2).

In the 1960's, the postneonatal infant mortality rate was 25% of the total infant mortality rate in the United States, but by 1987, it was responsible for 36% of the total. This is sometimes thought to be due to new technology which has prolonged the life of low birthweight babies (Kleinman and Kiely 1091) and has therefore improved the

neonatal mortality rate. However, there is no evidence that shows that the proportion lag in the postneonatal mortality rate is due to an increase in the survival of infants born with a low birthweight (Starfield 23). Approximately 80% of infants who die in the postneonatal period are of normal birthweight, whereas only about 28% of infants who die in the neonatal period are of normal birthweight (Starfield 27). The focus now has turned from neonatal mortality (which has been decreased due to the new technology) to postneonatal mortality. Because this involves not only a change in the health care system, but also a change in the entire social system of the United States, this is a much more difficult and complex task.

Low income appears to be the most powerful predictor of both total infant mortality and postneonatal mortality in the United States. Related risk factors are parental minority race and a low level of parental education. Single-parent status and young maternal age also contribute to stress, family disorganization, and inadequate supervision. These increase the risk of SIDS and deaths from injury or disease (Nersesian 371).

Poverty is a major problem in the United States, and studies show that it is the largest contributing factor to the high postneonatal infant mortality rate. One study compared the infant death rates between the poor and the nonpoor in Kentucky between 1982 and 1983. Kentucky's neonatal and postneonatal mortality rates are both higher than the national average. Researchers used Social Insurance Food Stamp files and matched them with the Aid for Families with Dependent Children to determine the parents' socioeconomic levels. The crude death rate for the poor was found to be 13.7

infant deaths per 1000 live births and for the nonpoor, it was found to be 10.8 infant deaths per 1000 live births. The postneonatal mortality rate was found to be the most significant portion of the total infant mortality rate, as the poor infants' risk for neonatal death was not different from the nonpoor infants' risk. Poor infants were 2.38 times more likely to die during the postneonatal period than nonpoor infants, and the excess mortality risk among the poor infants was greatest for the normal birthweight group (greater than 2500 grams at birth). Poor infants were found to have significant excess risks for SIDS and infections, which are considered to be at least partially preventable. The relative risk for postneonatal deaths due to SIDS increased from 2.49 for the nonpoor infants to 2.53 for the poor infants. The relative risk for infections increased from 1.78 for the nonpoor infants to 2.74 for the poor infants. Researchers calculated that 35% of postneonatal deaths due to SIDS and 39% of postneonatal deaths due to infections were due to poverty. Those deaths could therefore have been prevented if poverty could have been alleviated. Only 29.3% of nonpoor postneonatal deaths were attributed to SIDS while 36.3% of poor postneonatal deaths were due to SIDS. This is a large difference. The postneonatal infant mortality rate of poor families was more than double that of the nonpoor families in the study. Therefore more than half of the postneonatal deaths of the poor were preventable (Spurlock et al 262-9).

Another study produced similar results. Researchers compared the infant mortality rates in the ten wealthiest states with those of the ten poorest states in 1969-1971. The infant mortality rate was 20.5% higher in the poor states than in the wealthiest

states. During the 1970s, the postneonatal infant mortality rate was three times higher in the poor states than in the wealthy states (Nersesian 366).

The environmental conditions of poverty are possibly responsible for the increased risks for illnesses which commonly cause death in poor infants. Poor families are less likely to have clean water supplies, adequate sewage disposal, or knowledge of effective hygiene. Also, the stress of living in poverty may cause parents to miss early symptoms of illnesses which could otherwise be easily treated. In addition, there is less accessibility to health care, even among those who are on Medicaid, because some physicians will not accept it. The higher rates of infant mortality among the economically disadvantaged is a social problem as well as a health problem. Reduction of poverty, however, is an extremely difficult task which requires defining the population at risk, identifying why they are at risk, and determining how to reduce the risk. There are three ways that societies have attempted to uncouple poverty and health. Such methods include the elimination of poverty, provision of free, high-quality health care for all, and the elimination of high-risk behaviors such as smoking. Both Sweden and the United States have attempted the first two methods and have been met with some success, although the United States has been much more limited in its attempts. The third way has been less successful because it leads to victim blaming and does not take the context into consideration (Hogue and Hargraves 11).

An issue in postneonatal mortality rate which is related to poverty is racial differences. Minorities in the United States (particularly blacks and Native Americans) have significantly higher postneonatal mortality rates than whites. Studies have been

performed which have determined that poverty is the central reason for this difference, yet racial segregation also has an effect. The average per capita income for blacks is less than two-thirds that of whites, and in all regions of the United States, black babies are twice as likely to die in the first year of life as white babies. (Nersesian 368). Only 16% of postneonatal deaths in black babies are due to congenital anomalies (compared to 21-25% for the total population), demonstrating a larger percentage of preventable deaths. Every cause except for congenital anomalies, including mortality from infections, SIDS, and external causes (accidents and homicide), shows large racial differences (Kleinman and Kiely 1093). The higher infant mortality rate for blacks accounts for 26.9% of the excess mortality of blacks of all ages (Nersesian 368).

A study was performed in Alabama which studied the black/white difference in postneonatal mortality rate between 1980-1983. Injuries and infections were considered to be preventable, SIDS was listed to be of unknown causes, and congenital anomalies were considered to be unpreventable. It was found that only 26% of all postneonatal deaths were probably not preventable and approximately one-third were clearly preventable. Injury control and prevention of and prompt treatment of infectious diseases were cited as possible preventions. Blacks were found to be 2.2 times more likely to die during the postneonatal period than whites. The cause-specific relative risks for blacks are two to three times greater than for whites for all causes except for congenital anomalies. For example, blacks are three times as likely to die of infections as whites and 2.7 times as likely to die of injuries. In addition, place of residence is significant in the postneonatal mortality rate. Rural residence increased both the risk of postneonatal death

and the racial differential. The relative risk of postneonatal death is 2.1 for blacks in urban counties and 2.5 in rural counties. In addition, the relative risk of infection is much greater for rural blacks (4.0 for rural blacks as compared to 2.1 for urban blacks). Death due to injuries in rural areas is usually due to fire and aspiration, and in urban areas, it is most often due to assault (Druschel and Hale 869-72).

Another study was performed which divided mothers into three risk groups. The low risk group included mothers who were married, twenty years of age or older, had low parity, had thirteen or more years of education, and had early prenatal care. The high risk group of mothers were unmarried, were teenagers, had high parity, or had less than twelve years of education. All others were considered to be of moderate risk. Twenty-five percent of whites and ten percent of blacks were considered to be low risk. Only five percent of whites and twenty percent of blacks were high risk. The infant mortality rate increased with increasing risk for both black and white mothers, but the black rate was higher than the white rate at each risk level. For all causes of death combined, blacks had a 50% greater mortality at each level of maternal risk. As the risk increased, the postneonatal mortality rate accounted for an increasing portion of infant deaths. Excluding the congenital anomalies and including only normal birth weight infants, the moderate-risk group had two times the mortality rate and the high-risk group had four times the mortality rate of the low-risk group within each race. Therefore, the risk factors are extremely significant. If low-risk white mothers are used as the standard of comparison for black mothers, nearly 70% of deaths to black infants would be considered preventable (Kleinman and Kiely 1095-6).

Segregation and the resulting racism seems to be a significant factor in the high infant mortality rate for blacks. One study published in 1991 examined the differences in 38 large standard metropolitan areas in relation to socioeconomic status and an index of residential segregation. In all 38 cities, the black infant mortality rate was higher than that of white infants. The mean black/white difference was 8.63 per 1000 live births, ranging from 2.14 in Anaheim, Ca to 14.63 in Pittsburgh, Pa. The segregation index and the black/white difference in infant mortality rate were found to be significantly correlated. Anaheim had the lowest segregation index and the smallest black/white difference in infant mortality, where Los Angeles had among the highest of both. High levels of segregation occur mainly in cities which are larger, older, and have black ghettos. Potential reasons for increased infant mortality rates are availability of and use of treatment procedures and the level of training and the attitudes of health care providers (Polednak 1480-2).

The problems do not appear to be genetic, however, but are instead environmental. This is best demonstrated by a study by Rawlings and Weir determining whether poverty and lack of access to health care account for the infant mortality rate differences between blacks and whites. They looked at military dependents at Madagan Army Medical Center in Tacoma, Washington between 1985-1990. In the military, all service members have guaranteed access to health care and have higher levels of family education and income than the national average. Although military pay is relatively low, all military heads of the family are employed and most are high school graduates. At MAMC, the overall infant mortality rate was 9.3 deaths per 1000 live births in 1987. In

the same year, the infant mortality rate for the general population was 10.1 deaths per 1000 live births. An even greater difference was demonstrated in the black service members. The infant mortality rates among blacks in the medical center was 11.1 deaths per 1000 live births, which is compared to 17.9 deaths per 1000 live births among all black Americans in 1987. The ratio of mortality (black to white) at MAMC was 1.23 compared with 2.07 nationally. In addition, the infant mortality rates for junior enlisted soldiers were similar to both the commissioned and non-commissioned officers, suggesting that only a basic minimum standard of care is necessary to make a difference. Therefore, the absence of extreme poverty and access to health care can combat the infant mortality rate, no matter what the race of the individual (Rawlings and Weir 313-6).

In addition, similar education levels between blacks and whites reduce the black/white differential in infant mortality rate. One study was performed from 1983-1985 using children born to parents with at least sixteen years of education. After the exclusion of low-birthweight infants, the blacks and the whites had equivalent total infant mortality rates and postneonatal mortality rates. This study showed, therefore, that the black/white differential was lower for infants born to mothers with fewer risk factors than for those born to mothers in the highest risk groups. Even when studying SIDS as the cause of death, the number of black incidents was approximately equal to the number of white deaths in college-educated families. This shows that similar health care and home environments gives infants the same chance of survival (Schoendorf et al 1522-6).

Another study performed in North Carolina demonstrated that infants born to mothers

who were less educated were more likely to die of SIDS, infections, and other external causes (Dollfus et al 176-82).

Native Americans also have an infant mortality rate significantly higher than that of whites. In 1991, Native American Indians had an infant mortality rate of 14.3 deaths per 1000 live births (as compared to the all-race infant mortality rate of 8.9 in 1991). Also, the Native American postneonatal mortality rate is more than twice that of whites. Of all races studied in 1991, Indians had the highest postneonatal infant mortality rate of 7.4 deaths per 1000 live births (Rhoades et al 272). Whites had a postneonatal mortality rate of 2.8 deaths per 1000 live births and blacks had a rate of 6.3 deaths per 1000 live births in the same year (Wegman 749). The Native American postneonatal mortality rate makes up a greater proportion of deaths than the proportion that the all-race postneonatal mortality rate makes up for the total infant mortality rate (Honigfeld and Kaplan 576).

The leading causes of death are the same in the Native American population as in the white population, except SIDS, accidents, pneumonia, influenza, and meningitis occur in excess compared to the general population. SIDS is the greatest problem, and in 1987 SIDS occurred at 1.5 times the rate of whites (Rhoades et al 272-3). When deaths due to prematurity, birth trauma, and congenital anomalies are excluded, SIDS is responsible for 67.9%, pneumonia for 14.4%, accidents for 9.5%, diarrhea for 4.9%, and child abuse for 3.2% of infant deaths. The Native American accident rate for infants less than one year old is twice the United States all-race rate (78.5 vs. 39.4 per 100,000). This is partially due to the fact that physical abuse and neglect is a large problem in Native American families (Honigfeld and Kaplan 577). Males are more likely to die of accidents than

females, and motor vehicle injuries cause death much more often in Native Americans. The mortality rate of Native American male infants associated with motor vehicles is four times greater than all-race male infants (Rhoades et al 281). Also, many Native American postneonatal deaths are caused by gastroenteritis, pneumonia, and meningitis, which are preventable if seen early enough by a physician. This suggests that infants leave safe hospitals but go to unsafe environments (Honigfeld and Kaplan 575).

Native Americans tend to live in poorer socioeconomic conditions and have a higher level of poverty than other populations. In 1980, the Native American per capita income was 41% less than that of whites. Approximately 25% of Native Americans and only 7% of whites are below the poverty level. Unemployment in reservations is between 25-85%. Native Americans are also more likely to have the related problems of alcoholism, unemployment, and family disorganization. Child neglect, inadequate recognition of illnesses by parents, unsafe home environments, unavailability of adequate health care, and geographic conditions that impede travel to health care providers all affect the Native American infant mortality rate. Also, only 4% of white households have more than six people, as compared to 12 % of Indian households. Indians are twelve times as likely to be without plumbing (Honigfeld and Kaplan 577-8).

From 1981-1983, the postneonatal mortality rate was higher in ten of the twelve Indian Health Service Areas than the 1982 United States average of 3.7 postneonatal deaths per 1000 live births. California was lower and Oklahoma was equal. However, the Indian/non-Indian distinction for census enumeration was not as stringent in those two states. The proportion of the occurrence of some causes even varied by region,

which demonstrates that community conditions contribute to health problems. Also, in all but one of the IHS areas, the postneonatal mortality rate was higher than the neonatal mortality rate (Honigfeld and Kaplan 577).

Honigfeld and Kaplan believed that programs promoting prompt health care and preventing accidents on reservations would help to alleviate the high infant mortality rate. However, Nutting et al established a Managed Care Health program on the Papago reservation in Arizona and found that the greatest effect of the program was on the group who sought and received reasonably good care prior to the program. The group most at risk did not derive benefits (Rhoades et al. 278). Further studies must be done to determine ways to reach the group most at risk.

Health insurance in the United States is a large factor in the lack of access to medical care. The postneonatal infant mortality rate was relatively stable from 1950 to the mid 1960's. In 1965, a sharp decline began with the implementation of Medicaid and other health programs (Kleinman and Kiely 1097). Both Medicaid and Medicare were intended to provide equal access to the benefits of health care. Since their implementation, deterioration of their benefits has occurred due to the large federal budget deficit, tight state budgets, and a sluggish economy. The inequities in the health system are again becoming large. Access to health care is determined by insurance coverage, and the estimated number of people not covered either privately or by military, Medicaid or Medicare in 1991 was between 31-37 million. The number is growing daily. The uninsured are twice as likely to be without a regular source of care. People aged 19-24 are the least likely to be insured, as three out of ten people of that age group have no

insurance. Approximately 17% of children have no health insurance. The lack of health insurance has racial disparities, as 12% of whites, 22% of blacks, and 32% of Hispanics have no insurance. Also, 6.8% of whites, 25.1% of blacks, and 18.3% of Hispanics have only public coverage (as compared with only private coverage or employment-related private coverage). In the United States, the unemployed are not the only ones who have problems obtaining health insurance. Many employed people who are in low-paying and seasonal occupations or who work for small businesses are not insured. The employed account for 70-75 % of uninsured when dependents are counted. In addition, approximately 27% of the United States population is underinsured. Many uninsured people are poor, but they do not qualify for Medicaid because they are above the minimum income level in their states. Medicaid initially covered more than 60% of the poor, but it now covers only 45% (Rice 637-45).

The increasing lack of health insurance has had an increasing risk of adverse outcomes in newborns. This was demonstrated by a study performed from 1982-1986 on newborns born in an eight-county area of California. Researchers found that adverse hospital outcomes such as prolonged hospital stay, transfer, and death were higher for uninsured than for privately insured infants. This risk was especially elevated for uninsured blacks, who were four times as likely as uninsured whites to suffer adverse outcomes. It was also higher for uninsured Latinos, who were twice as likely as uninsured whites, and for uninsured Asians, who were 1.4 times as likely to suffer complications as uninsured white infants. The proportions of newborns without insurance is increasing over time, and therefore, the problem is becoming worse. The

minority groups have the greatest need for health care and are the most likely to lack insurance (Braveman et al 508-12). Insurance should definitely be a target when evaluating necessary changes in order to provide better access to health care.

Spending on medical care does not appear to be the problem in the United States. From 1960-1988, medical care spending in the United States increased from \$27 billion to \$540 billion (from 5.3% to 11.1% of the GNP). The United States government spent \$2,124 per capita in 1988, rising from \$143 in 1960. In this 28 year period, the GNP grew 9.5 times while health expenditures increased twenty-fold. These increased expenditures are due to newer and more expensive technology, increased public support for the aged, disabled, and poor, and higher wages and salary costs in the health care industry, to name only a few. The vast expenditures for health care seem as if they should be making improvements, but they are providing neither universal access nor higher health status. Japan's per capita expenditure for health is less than half of that of the United States, yet Japan has half the infant mortality rate (Rice 645-51). Money in the United States does not appear to be focused in the right places.

In order to determine ways to alleviate the problem of the high infant mortality rate in the United States and to determine better ways to spend available money, it is important to evaluate the health care system of countries with more success. The "Swedish model" of health care has been greatly studied for this reason, and family characteristics as well as health care services have been evaluated. The infant mortality rate in Sweden has been decreasing since the mid-eighteenth century. Improved living conditions, such as better housing, hygiene, and education, contributed most to the

original decline (Kohler 178). In 1991, the Swedish infant mortality rate was 6.2, which placed it fourth among countries with a population greater than 2,500,000. In the same year, the United States had an infant mortality rate of 8.9, which placed it 22nd (Wegman 753). In 1983, the overall postneonatal infant mortality rate in the United States was 60% higher than that of Sweden (Hogue and Hargraves 10).

Many people believe that the infant mortality rate in Sweden cannot be compared to that of the United States because of the differences in the two societies. Many people believe Sweden has a homogenous society. However, the opposite may actually be true, and racism in the United States may be given too much emphasis (Williams 20). Since World War II, immigration has greatly affected Sweden. There are now over 150 nationalities represented in Sweden. The entire population is 8.5 million, and at least 1 million are immigrants themselves or have one immigrant parent. Every eighth child is of foreign background. In 1986, 48% of the Swedish population was from other Nordic countries, 27% were from other European countries, 14% were from Asia, 4% were from South America, 2% were from Africa, and 2% were from North America. Approximately 5% of the country's work force of 4.4 million are immigrants. As in the United States, immigrants tend to have poorer working environments, do shift work, live in more crowded conditions, and have a larger number of dependents. The income differential, however, is comparatively small. Interestingly, recent immigrants have higher perinatal mortality rate and more low-birthweight children than the rest of the population, but the infant mortality rate is reduced when the children are born in Sweden. Therefore, the

health care system is working, as it improves the quality of life almost instantly (Kohler 185).

Sweden is an affluent country. In 1988, the GNP per capita was \$21,546 in Sweden, and in the United States it was \$19,558. The high standard of living is well distributed among socioeconomic groups. In March 1990, the unemployment rate was only 1.3%. Many women work, and 82% of children between the ages of 0 and 6 have working mothers. Sweden is a welfare state, which means that it is based on a private market economy system. However, there are many public social services and a guaranteed minimum income for individuals. Sweden also has a dense social security net which takes care of the sick, the old, and those who can otherwise not take care of themselves. In 1987, 30% of the GNP was spent on this social security, which includes health care, unemployment, pensions, family allowances, and public assistance. Another 9% was spent on health care. In the United States in the same year, 20% of the GNP was spent on social security and 11.2% was spent on health care (Kohler 185-6).

In the United States, there is an overall relationship between socioeconomic status and infant mortality rate. However, this is not the case in Sweden. This is partially because socioeconomic inequalities are not as great and there is therefore not much reporting of social class. However, this is also due to the Swedish model of health care. The Swedish social policy is comprehensive, and public intervention is much more broad than in most countries. The social entitlement principle has been greatly institutionalized, and people feel that they have a democratic right to an adequate standard of living. The Swedish system targets the entire population instead of focusing on particular groups, as

is done in the United States. The Swedish are pursuing a "more socially just society" (Kohler 186). A policy which particularly causes Sweden's lower infant mortality rate is the Swedish family policy. It was instated shortly before World War II, and through this policy, the Swedish government provides economic and social support to families with children. The government gives child allowances of \$1300 (US dollars) per year per child up to age sixteen. This allowance is extended if the child remains in school. If a family has three or more children, they are given extra allowances -- one-half the normal child allowance plus the full sum for an additional child. These allowances are paid to everyone regardless of income, and are tax-exempted. In addition, there is a parental benefit scheme. Parents receive paid parental leave for fifteen months during the child's first seven years. This leave can begin up to two months prior to delivery for the mother. After birth, the parents can divide the remaining time, if they wish to do so. The amount of fathers who used the parental leave time rose from 3% in 1974 to 23% in 1986. In addition, fathers receive ten days with compensation when the child is first born, even though the mother is receiving benefits at the same time. This is used by 83% of fathers. Also, as of 1990, parents are entitled to parental benefits when children are sick for up to 120 days per year for each child. This is used an average of eight days per year. It is also illegal to fire a woman because of pregnancy, and parents with children under the age of eight can reduce work to three-quarters full time (with reduced pay). The total cost of this Parental Benefits Scheme is 0.8% of the GNP. In addition, there are Maternal and Child Health Programs which provide preventive services, check-ups, and education.

They are easily accessible and are also included in the National Health Care Insurance (Kohler 186-7).

Another policy believed to play a role in the low infant mortality rate is the Swedish Abortion Act of 1975. The Swedish Abortion Act of 1975 provides for free abortions until the end of the 18th week of pregnancy. The abortion rate has remained constant since the Act's passing at 20 abortions per 1000 pregnancies. The teenage rate of abortions in Sweden has since declined. In 1975, the United States and Sweden had similar teenage abortion rates (30 per 1000 in mothers who were between 15-19 years old). By 1981, the Swedish teenage abortion rate had decreased by 30% and the teenage abortion rate in the United States had increased by 43%. There has been a recent increase in Sweden from 18 abortions per 1000 teenage pregnancies in 1984 to 24 abortions per 1000 teenage pregnancies in 1988, but the teenage abortion rate still remains lower than that of the United States. The Swedish Abortion Act emphasizes preventive measures such as sex education and inexpensive contraceptive advisory services. The Act was evaluated in 1983 by a parliamentary committee who found that the Act had increased the use of contraceptives and that the free abortions were not being used as contraceptives (Kohler 183-4).

The National Health Service in Sweden pays for medical services. The patient pays only a small fee for outpatient service and for prescriptions. The county councils are responsible for both individual- and population-oriented health services and for both outpatient and inpatient medical care. The social welfare services and public health (environmental hygiene) are taken care of by the 284 municipalities. Private health care

in Sweden is limited, and only 8% of physicians work full-time in private practice. There are a limited number of private medical care institutions, and they are mainly private nursing homes (Kohler 187-8).

Until the 1960s, higher infant mortality rate occurred among infants born out of wedlock in Sweden. However, now there is no difference because of changes in social norms and the improved social welfare programs. In Sweden in the 1940s, 8% of children were born out of wedlock. In 1988, approximately 50% are born out of wedlock. However, this means little because the mother may not necessarily be alone today as she once was (Kohler 192).

One study was performed in Sweden to determine if education levels caused differences in infant mortality rates even though there are no class differences regarding quality and availability of health care. Education is a good measure because the more educated people tend to better understand the risk factors and prevention. Researchers studied all single Nordic births between 1983-1986 in Nordic mothers aged 15 to 44 years. The maternal education level caused a U-shaped curve for total infant mortality rate, and congenital and asphyxia-related conditions. The incidence of SIDS decreased with the length of education. Therefore, the only obvious social pattern as measured by the maternal education level is for SIDS. As maternal age, number of births, and smoking habits were successively included, the difference between social class (as measured by education level) as is demonstrated by SIDS decreased and then disappeared. The authors believe that the relatively minor importance of maternal education in Sweden is a result of "a generally high standard of living; of high medical,

technical, and economic developments; and of the nationwide, free prenatal and child health care system” (Nordstrom, Cnattingius, and Haglund 26-9).

The postneonatal mortality rate is an indicator of the health status of the individuals living in a country. When all races are combined, the United States has a relatively high infant mortality rate and postneonatal mortality rate. This is predominately due to the high incidence of poverty, which is best demonstrated by the correlation between minority infant mortality rates and per capita incomes. It has been demonstrated that in absence of a lack of access to health care, minorities can have relatively equivalent infant mortality rates as the general population. Access to health care is, however, blocked for many individuals in the United States because of a lack of insurance. The fact that a higher percentage of minorities are not insured emphasizes societies’ role in causing the problems of high infant mortality rate and postneonatal mortality rate. Sweden, by comparison, has a low total infant mortality rate and postneonatal mortality rate. Sweden also has national health insurance and few class differences. In order to improve the health of its citizens, the United States should evaluate its current health care system and consider the systems of countries such as Sweden who have had more success.

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