CHAPTER FIVE

Segregation, Poverty, and Empowerment

Health Consequences for African Americans

Thomas A. LaVeist

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Despite apparent advances, many problems persist. The data speak loudly to the existence among African Americans of greater social and health problems than among their white compatriots. African Americans have higher rates of unemployment, illiteracy, unwed and teen births, low birthweight, homicide, and infant mortality. In a 1985 essay, John McKnight labeled these facts "an inventory of health costs of powerlessness."[1] How can we reconcile these grim realities with recent black social, political, and economic gains? In other words, what are the health consequences of black social and political progress?

SOCIAL FACTORS AND INFANT MORTALITY

It has become the dominant view among medical sociologists and demographers that improvements in the general standard of living are the primary reason for the impressive declines in infant mortality in industrialized societies.

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Observations of the effect of societal factors on mortality rates surfaced as early as the first decades of the twentieth century.[2] Studies demonstrating the impact of social forces on mortality can be found among the earliest works in sociology.[3] René Dubos's study of 1959 is perhaps most closely associated with this perspective.[4] However, numerous other examples exist in both the social and the health sciences literature.[5–12]

Based on his cross-national examination of the effects on mortality of improvements in the standard of living, Preston found a declining marginal return on increasing increments in standard of living.[13] Therefore, it would seem that further declines in mortality in industrialized societies are dependent on medical technology. However, Wise and colleagues' examination of more recent experiences in Boston suggests that, as medical technology approaches its maximum utility in reducing infant mortality, social factors will reclaim the central role in producing infant deaths.[14,15] It stands to reason that the most vulnerable populations would be most severely affected.

Since the United States began to collect race-specific data, the black infant mortality rate has consistently been reported to be double the white rate. This suggests that over the years African Americans have experienced consistent and invariant deprivation relative to whites. Figure 5.1 shows that, whereas infant mortality rates for both black and white Americans have declined since

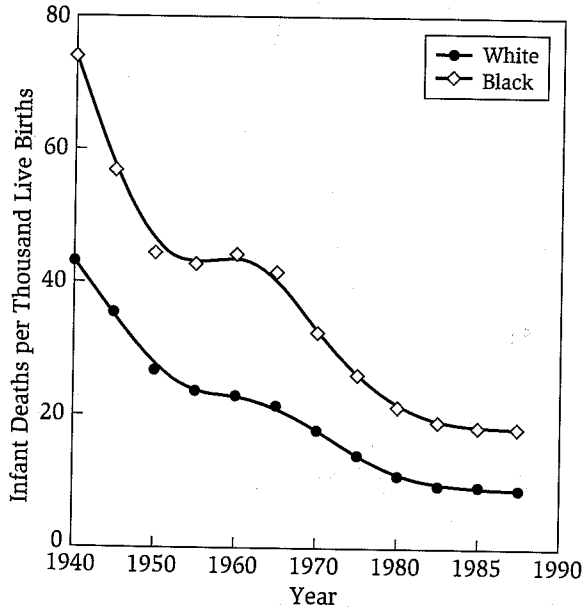

Figure 5.1 Black-White Disparity in Infant Mortality in the United States.

at least 1940, little progress has been achieved in reducing the black-white relative rate.

However, the relationship between race and infant mortality is more complex than the persistent 2:1 ratio displayed in Figure 5.1 would suggest because the spatial variation in the black-white infant mortality rate is also substantial.

Figure 5.2 shows the distribution of the black-white five-year infant mortality differential ratio (relative rate) aggregated over the years 1981 to 1985 for all U.S. cities of 50,000 or more that are at least 10 percent black. The analysis displayed in Figure 5.2 indicates that the degree of black-to-white relative disadvantage varies substantially across the cities. The figure shows a leptokurtic normal curve. The black-white infant mortality ratio ranges between .56 and 5.02, and in eight cities there is a higher infant mortality rate for whites than for blacks. Cities range from having an infant mortality rate that is lower among blacks than whites to having a rate that is more than triple among blacks as compared to whites. In one extreme outlier, Kenner, Louisiana, the black infant mortality rate is five times the white rate. (This outlier was excluded from the figure, but was included in all analysis.) The list of cities examined in this study,

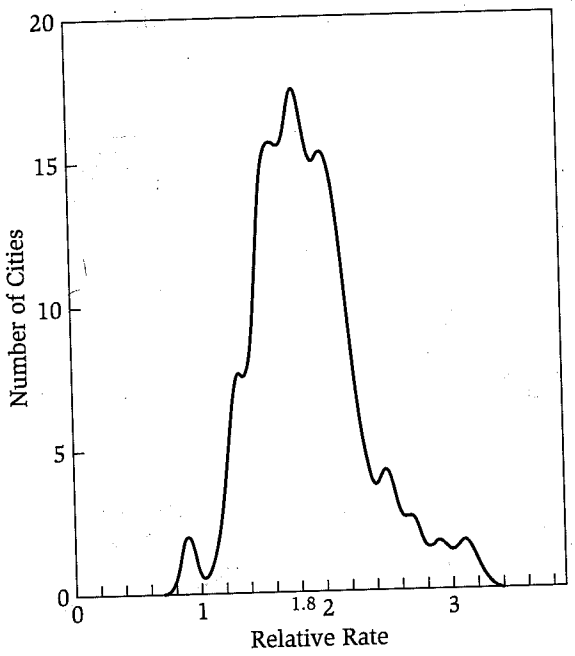

Figure 5.2 Black-White Relative Rate of Infant Mortality in U.S. Cities of 50,000, 1981–1985.

along with their infant mortality rates and black-white ratios, is displayed in the Appendix to this chapter.

Perhaps social factors in these cities have had a differential impact on African Americans and whites. If so, elucidating these factors may help to identify areas of potential for intervention. By successfully manipulating them, we may bring about a reduction in the current black-white disparity in infant mortality. I propose to examine three social factors: racial residential segregation, poverty, and black political empowerment.

RACIAL RESIDENTIAL SEGREGATION

. . . one Black, one White—separate and unequal.
—U.S. National Advisory Commission on Civil Disorders[16]

In its 1968 report to President Lyndon Johnson, the National Advisory Commission on Civil Disorders concluded, "Our nation is moving toward two societies, one Black, one White—separate and unequal."[16] More than two decades later there is reason to believe that we are no longer moving toward separation, but, rather, have arrived at the point where racial segregation has become an enduring feature of America's social arrangement[17] (see Table 5.1).

In 1987 the U.S. infant mortality rate ranked seventeenth internationally. However, when the U.S. black-white disparity is viewed in an international context, the rate for white Americans improves to twelfth and the African American rate drops to twenty-sixth. If America has indeed become two societies, then white American society is comparable to other industrialized countries, whereas black American society borders on being a Third World nation.

Yankauer was the first to establish empirically a link between racial segregation and health status. In his analysis of data from New York City in the 1940s, Yankauer observed that infant mortality rates, for both blacks and whites, were highest in the most severely segregated black neighborhoods.[18] The racial segregation–infant mortality finding has been replicated in more recent national studies. I demonstrated this relationship in an earlier study that analyzed large and midsized U.S. cities.[19] Although I found black infant mortality rates to be higher in highly segregated cities, I discovered that white rates were essentially unaffected by a city's level of segregation. Indeed, white rates dropped only slightly as segregation increased. Jiobu's path analysis of a somewhat smaller set of cities during the 1960s also demonstrated a link between segregation and infant mortality.[20]

Although the empirical link between segregation and mortality is fairly straightforward, the specific supporting mechanisms for this association are less

Table 5.1. International Comparisons of Infant Mortality Rates, 1986

Rank	Country	IMR
1	Sweden	7.0
2	Japan	7.1
3	Finland	7.6
4	Norway	8.1
5	Netherlands	8.2
6	Denmark	8.4
7	Switzerland	8.5
8	Australia	9.6
9	France	9.6
10	Spain	10.3
11	Singapore	10.8
12	*United States–white*	*11.0*
12	Canada	11.0
13	Belgium	11.7
14	Austria	11.9
14	New Zealand	11.9
17	*United States–total*	*12.1*
18	German Democratic Republic	12.3
19	Federal Republic of Germany	12.6
20	Italy	14.3
21	Israel	15.1
22	Jamaica	16.2
23	Czechoslovakia	16.8
24	Greece	17.9
25	Cuba	18.5
26	*United States–black*	*20.0*

Note: IMR = infant mortality rate.

direct. The body of research on this topic suggests the prevalence of a variety of problematic social conditions in highly segregated black communities. Previous research has established that segregated black urban communities are highly toxic environments,[21,22] which are not as well served by city services,[23,24] lack adequate medical services,[25] and have higher housing costs, thus leading to an inflated cost of living.[26] Thus, segregation can be viewed primarily as an easily quantifiable summary measure of differences in the material living conditions of black and white Americans.

POVERTY

The level of living of the masses of Negroes trapped in these densely populated continuously deteriorating ghettoes [is] not likely to keep pace with "the American way of life."
—Killian and Grigg[27]

Poverty is the best documented social risk factor for infant mortality. Empirical examples of the relationship between them can be found as early as the first decade of the twentieth century.[2] The sheer volume of research supporting a link between poverty or low socioeconomic status and infant mortality is impressive.[28–32] In fact, one author pronounced any further research on the relationship between poverty and infant mortality to be "a waste of time, money and effort, because the gross relationship [had] been established conclusively enough."[33]

It is axiomatic to state that poverty has been an enduring component of the African American reality. Indeed, some scholars have had difficulty distinguishing the line of demarcation between being black and being impoverished. Some researchers have used race as an indicator of poverty status. It has even been asserted, somewhat controversially, that black-white disparities in infant mortality (and health status in general) can be attributed solely to black-white disparities in socioeconomic status. Others have argued, however, that race is more complex. Status as an African American is not quite the equivalent of being a low-income white American. African Americans have cultural values and behaviors; because of racism, they are exposed to potential health risks that sustain race as a determinant of health status, irrespective of social class.

The resolution of this debate is best left for another occasion. However, for now, the establishment of two important facts is relevant: first, that socioeconomic status is an important social risk factor for infant mortality and, second, that poverty is more prevalent among African Americans than among white Americans.

POLITICAL POWER AS A STRATEGY FOR HEALTH

True liberation can be acquired and maintained only when the Negro people possess power; and power is the product and flower of organization.
—A. Phillip Randolph[34]

Several scholars have speculated that political empowerment might have a beneficial impact on health status.[1,35,36] In a 1989 letter to the editor of the *Journal of the American Medical Association,* Braithwaite and Lythcott argued that race differentials in health status were outward manifestations of power differentials and asserted that the feelings of hopelessness and alienation from societal

institutions impeded appropriate health and illness behaviors. This, they argued, resulted in poorer health status among African Americans.[35]

In an essay published in the *Canadian Journal of Public Health,* McKnight maintained that the traditional tools of public health have met with only limited success in improving the health status of disenfranchised groups.[1] Thus, because the highest indexes of poor health were found among groups with the least power, the social and political empowerment of these groups may lead to new remedies that are more effective in improving their health status.

My empirical examination supported the hypothesis that political power would affect health status.[36] Black postneonatal mortality rates were lower in cities where African Americans had higher levels of political power; white postneonatal mortality rates were not affected by the level of black political power. Therefore, black political power led to a narrowing of the postneonatal mortality gap between African Americans and whites. The theoretical link between black political power and black postneonatal mortality is shown in Figure 5.3. Tests to determine the mechanisms that create the observed association ruled out the most obvious explanation: that black elected officials might allocate resources in such a way as to benefit African Americans. Rather, the analysis led me to conclude that community organization is the common factor underlying the infrastructure that both facilitates greater black political power and improves the material conditions of African Americans' lives. These improved conditions in turn are manifested in lower black postneonatal mortality rates.

ASSESSING THE IMPACT OF SEGREGATION, POVERTY, AND POLITICAL POWER

The research literature contains support for each factor—segregation, poverty, and political power—as an important social predictor of health status. Yet how interrelated are these social phenomena in their impact on black-white

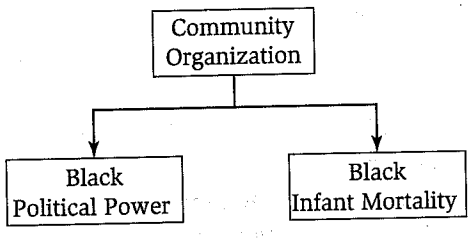

Figure 5.3 Schematic of the Relationship Between Black Political Power and Black Infant Mortality.

differentials? I will address this question through an empirical examination of data from cities throughout the United States. Cities were selected for the study that had a population in 1980 equal to or exceeding 50,000, at least 10 percent of which was African American. These selection criteria resulted in a population of 176 cities representing thirty-two states and all regions of the United States. Data for the analysis were derived from various published sources, including the National Center for Health Statistics, the U.S. Census Bureau, and the Joint Center for Political and Economic Studies.

Infant mortality rate is a long-standing general indicator of overall social and economic development, availability, and use of health services, health status of women of childbearing age, and quality of social and physical environment.[37] It has been applied for this purpose in studies conducted at various levels of analysis: international,[13] national,[38] state,[20,39] county,[40] and city.[41] The black-white disparity in infant mortality is computed by taking the ratio of black to white infant mortality rates for each city (relative rate). Five-year rates (1981–1985) are used in order to control for possible single-year variations in cities with few births or infant deaths.

Racial residential segregation is measured using the index of dissimilarity for 1980. The index is a measure of the degree of racial residential segregation based on a scale ranging from 0 (no segregation) to 100 (complete segregation). (See White[42,43] or Duncan and Duncan[44] for a complete empirical and conceptual assessment of this measure.) Poverty rates are based on the percentage of families whose income and family size indicated that their standard of living was below the federally determined poverty level at the time of the 1980 U.S. Census. Black political power is the ratio of the percentage of African Americans on the city council to the percentage of African Americans in the voting-age population for 1983–1984.[45–47]

FINDINGS

Figure 5.4 schematically displays the conceptual model that guided my analysis. I hypothesized that racial residential segregation was an exogenous variable with a causal link to both poverty and political power. Each variable was predicted to be directly related to the black-white disparity in infant mortality. Segregation, furthermore, was hypothesized to be both directly and indirectly associated with the black-white disparity in infant mortality.

To begin the analysis, I conducted a preliminary assessment of the general relationships among the variables by calculating unadjusted correlation coefficients. The results of this preliminary analysis, displayed in Table 5.2, show that residential segregation has a statistically significant association with each endogenous variable except white poverty. In cities with high levels of

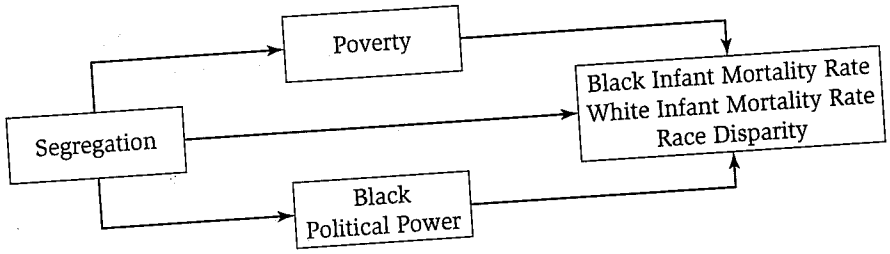

Figure 5.4 Infant Mortality Rate (IMR) Conceptual Model.

segregation, a larger proportion of the black population lives below the poverty level. However, a city's degree of segregation is not significantly related to white poverty.

A less deleterious consequence of segregation is reflected in the positive association between segregation and black political power, which indicates that African Americans are better able to achieve political power in highly segregated cities. This finding, which is consistent with Vedlitz and Johnson's analysis,[48] probably reflects the fact that most cities elect city council representatives by districts. Highly segregated cities more often contain districts that constitute majority black voting blocs, thus improving the likelihood of electing African American representatives. Because the measure of black political power is based on city council representation, this finding is to be expected.

The relationship between segregation and the black-white disparity in infant mortality replicates analysis published elsewhere.[18–20] The table indicates a confirmation with the findings from these studies, which is that the disparity in black-white infant mortality rates tends to be greater in highly segregated cities.

Table 5.2 also shows that for both blacks and whites poverty is positively associated with black infant mortality. White poverty is also significantly inversely associated with the black-white disparity in infant mortality: that is, as

Table 5.2. Zero-Order Correlations

Endogenous Variable	Residential Segregation	Black Poverty	White Poverty	Black Political Power
Black poverty	.327***			
White poverty	−.066	.225***		
Black political power	.259***	.191**	.116	
Black infant mortality	.247***	.181**	.060	−.121*
White infant mortality	−.124*	.164*	.418***	.062
Race disparity in infant mortality	.305***	.047	−.153*	−.048

*$p \leq .1$; **$p \leq .05$; ***$p \leq .01$.

the poverty rate of whites in a city climbs, the gap between black and white infant mortality rates narrows. This narrowing takes place because the white infant mortality rate is so adversely affected by white poverty rates. Finally, although the presence of black political power clearly reduces black infant mortality rates, the magnitude of the reduction is not enough to affect the black-white disparity significantly.

It is interesting to note three interrelated findings.

1. Black infant mortality is higher in highly segregated cities.
2. Black political power is greater in highly segregated cities.
3. Black infant mortality is lower in cities with greater black political power and higher in cities with high segregation.

These may, at first, appear to be contradictory findings; however, further analysis reveals that they are not. I have described elsewhere the modifying impact of black political power on the connection between segregation and black infant mortality.[49] In a highly segregated black community political empowerment can reduce (but not entirely eliminate) the negative consequences of segregation. This finding illustrates the importance of multivariate analysis. The preliminary bivariate (unadjusted) analysis presented in Table 5.2 is instructive; however, it is necessary to conduct multivariate analysis in order to determine if the relationships presented in Table 5.2 persist once the influence of other potentially confounding variables is taken into account.

Tables 5.3 and 5.4 present multivariate analysis to examine the relationships outlined in Figure 5.4. Table 5.3 assesses how segregation is related to black poverty, white poverty, and black political power. Control variables indicating

Table 5.3. OLS Regression Unstandardized Coefficients for Black Poverty, White Poverty, and Black Political Power Regressed on Segregation

Independent Variable	Black Poverty	White Poverty	Black Political Power
Constant	28.14	3.97	.025
Segregation	.165***	−.497	.012***
Log of population	−2.64**	.218	−.062
West	−5.492***	1.397**	.208
North Central	−2.032*	1.209***	.145*
Northeast	.092	3.134***	.083
R^2 (adjusted)	.20	.21	.09

Note: OLS = ordinary least squares.

*$p \leq .1$; **$p \leq .05$; ***$p \leq .01$.

Table 5.4. OLS Regression Unstandardized Coefficients for Black Infant Mortality, White Infant Mortality, and the Black-White Disparity in Infant Mortality

Independent Variable	Infant Mortality Rate		Black-White Disparity
	Black	White	
Constant	14.05	9.31	2.20
Segregation	.065**	−.032**	.012***
Black poverty	.075*		−.002
White poverty		.316***	−.034**
Black political power	−.238*	.093	.018
Log of population	−.197	.038	−.154
West	−2.648**	−.647	−.218*
North Central	1.718**	.976**	−.023
Northeast	.404	.207	−.018
R^2 (adjusted)	.11	.22	.10

Note: OLS = ordinary least squares; IMR = infant mortality rate.

*$p \leq .1$; **$p \leq .05$; ***$p \leq .01$.

the city's regional location and the natural log of its population are included in each model for two reasons: (1) the relationship between segregation and the dependent variables (poverty and black political power) may vary by region, or (2) the size of the city's population may influence the consequences of segregation on the dependent variables. By controlling for region and population it is possible to calculate the adjusted relationship between segregation and the dependent variables.

Table 5.3 shows that after adjusting for the effects of the other variables in the analysis (listed in the table) the relationship between segregation and poverty has not been affected. Although segregated cities tend to have higher levels of black poverty, white poverty rates are not significantly affected by segregation. Also, although African Americans in segregated cities suffer higher poverty rates, they are better able to attain political power. These findings are consistent with Table 5.2. Table 5.3 also shows that black urban poverty rates are lower in the West and the North Central region than they are in the South. However, white urban poverty rates are highest in the Northeast.

Are these relationships implicated in black infant mortality? The analyses displayed in Table 5.4 show that, after accounting for the effects of the other social factors on black infant mortality, the crude relationships displayed in Table 5.2 have not been eliminated. Black infant mortality is higher in very segregated cities and in cities where there is more black poverty. Black infant mortality rates are lower in cities where blacks have achieved greater political power. Regionally, black infant mortality rates are higher in the North Central part of

the country and lower in the West compared to the South. It should also be noted that white poverty is far more strongly associated with white infant mortality than black poverty is with black infant mortality. The inverse association between segregation and white infant mortality suggests that whites benefit from segregation. However, the nonsignificant effect of black political power on white infant mortality suggests that black political gains have not come at the expense of whites.[36]

The model in Table 5.4 shows how the relationships between segregation, poverty, and black political empowerment extend to the black-white disparity in infant mortality. This model indicates that the zero-order associations summarized in Table 5.2 also hold up within multivariate analysis. The black-white gap in infant mortality is greater in more highly segregated cities. The disparity is smaller in cities with high rates of white poverty. However, black poverty and black political empowerment do not directly affect the black-white disparity in infant mortality. The analysis also shows that the black-white disparity in infant mortality is smaller in the West than in the South.

SUMMARY AND DISCUSSION

In spite of strong achievements in improving the chances of survival for infants born in the United States, there has been little success in reducing the national black-white differential in infant mortality. The black infant mortality rate has been reported consistently to be double the white rate. However, when the black-white infant mortality disparity is examined within smaller geographic units, a more complex relationship between race and infant mortality emerges. There is, indeed, substantial geographic variation in the degree of black to white relative disadvantage.

Three factors distinguished cities in this analysis: segregation, poverty, and black political empowerment. Because these are potentially malleable social factors, policy and other interventions have the potential to be effective. The association between segregation and the black-white disparity in infant mortality consists of a higher black infant mortality rate and a lower white infant mortality rate in highly segregated cities. Poverty is associated with both black and white infant mortality, but only white poverty is directly related to the differential in black-white infant mortality. Black infant mortality rates are lower in cities where blacks have gained a measure of political empowerment. However, the effect of this power on black infant mortality is not strong enough to significantly reduce the disparity in black-white infant mortality.

Previous findings indicate that, even among middle-class African Americans, race dictates access to neighborhoods whose resources (for example, schools, medical services, employment opportunities) are commensurate with level of

income. They are excluded from neighborhoods where their white middle-class counterparts reside largely on the basis of race.[50] Villemez demonstrated that African Americans get a smaller return for their investments in human capital, such as quality of residence and education, than do whites.[51] Thus, black spatial mobility is artificially constrained. Structural barriers militate against the link between spatial and social mobility.[52,53]

The interplay between residential segregation and the political and social organization of cities produces structural constraints that limit black life chances.[50,54] Limitations on black spatial mobility constrain even the more affluent African Americans by restricting their access to employment opportunities,[55–58] relegating their children to inferior schools,[59,60] and exposing them to greater environmental health risks.[22,61] Thus, regardless of economic resources, many middle-income African Americans are forced to live in socio-environmental conditions that—although superior to those of low-income blacks—are not consistent with their economic status. This finding coincides with the stronger association between poverty and infant mortality among whites than blacks ($b = .375$, $\beta = .4$, $p < .001$ for whites and $b = .075$, $\beta = .12$, $p < .1$ for blacks).

My analysis suggests the importance of research to explore the city characteristics that lead to the variability in infant mortality rates displayed in Figure 5.2. In none of the models I have presented does the adjusted R^2 exceed 22 percent of variance explained. Future research is needed to examine the impact of other correlates of aggregate infant mortality on the black-white differential. Examples of these variables include access to medical technology, quality of housing,[31] overcrowded living conditions,[62] quality of medical care under Medicaid,[63] and exposure to air pollution.[64] Corman and Grossman concluded that the availability of abortion, of neonatal intensive care units, education, Medicaid, community health service projects, maternal nutrition programs, and family planning services has an impact on neonatal mortality rates at the county level.[40] However, the topic of black-white infant mortality differences has seldom been a primary concern in published reports.

We can learn important lessons from the characteristics that distinguish cities with a slight disparity in black-white infant mortality rates and cities from those in which a great gulf exists. Discovering more about these characteristics will help to guide policy and to inform intervention that may lead to reducing black-white disparities in infant mortality at the national level.

This line of research is still in the preliminary stages. Ecological data have their limitations, which means that it is of paramount importance to develop strong theory. An instructive line for future research—through qualitative investigations—would be an exploration of the specific mechanisms that link poverty, segregation, and political empowerment with infant mortality.

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Appendix

City Ratings in Five-Year Infant Mortality Race Disparity for All U.S. Cities of 50,000 or More and 10 Percent Black, 1981–1985

			Population		Infant Mortality	
Rank	City	Total	Black	White	Black	Ratio
1	Passaic, NJ	52,463	10,367	16.8	9.4	0.56
2	Fairfield, CA	58,099	7,175	12.3	7.3	0.59
3	Harrisburg, PA	53,264	23,234	23.4	15.2	0.65
4	Hawthorne, CA	56,447	7,530	10.8	8.5	0.79
5	Bossier City, LA	50,817	7,114	10.4	8.3	0.80
6	Daly City, CA	78,519	8,464	11.2	9.0	0.80
7	East St. Louis, IL	55,200	52,771	23.0	20.6	0.90
8	Cambridge, MA	95,322	10,409	9.9	8.9	0.90
9	Gary, IN	151,953	107,537	16.0	16.8	1.05
10	Elyria, OH	57,538	7,445	15.0	17.1	1.14
11	Oakland, CA	339,337	159,234	13.4	15.5	1.16
12	Lorian, OH	75,416	8,892	11.1	13.0	1.17
13	Fort Wayne, IN	172,196	25,063	13.4	16.7	1.25
14	Camden, NJ	84,910	45,028	16.7	20.9	1.25
15	Anderson, IN	64,695	8,870	13.4	16.8	1.25
16	Jersey City, NJ	223,532	61,954	16.2	20.4	1.26
17	Clarksville, TN	54,777	11,481	14.2	17.9	1.26
18	Lawton, OK	80,054	12,721	13.3	16.9	1.27
19	Asheville, NC	53,583	11,386	11.4	14.5	1.27
20	Kansas City, KS	161,087	40,826	13.3	17.0	1.28
21	Akron, OH	237,177	52,719	17.2	22.0	1.28
22	Chesapeake, VA	114,486	31,552	11.1	14.6	1.32
23	Baltimore, MD	786,775	431,151	12.5	16.5	1.32

Appendix (Continued)

Rank	City	Population			Infant Mortality	
		Total	Black	White	Black	Ratio
24	Midland, TX	70,525	7,081	11.4	15.1	1.32
25	Alexandria, LA	51,565	24,653	13.1	17.4	1.33
26	Elizabeth, NJ	106,201	19,307	12.3	16.4	1.33
27	High Point, NC	63,380	17,803	15.1	20.3	1.34
28	New York, NY	7,071,639	1,784,124	12.1	17.0	1.40
29	Pontiac, MI	76,715	28,438	17.0	23.9	1.41
30	Long Beach, CA	361,334	40,732	11.4	16.3	1.43
31	Durham, NC	100,831	47,481	13.7	19.6	1.43
32	San Francisco, CA	678,974	86,414	10.2	14.6	1.43
33	Oak Park, IL	54,887	5,944	8.8	12.6	1.43
34	Daytona Beach, FL	54,176	17,705	13.3	19.1	1.44
35	New Haven, CT	126,109	40,153	14.6	21.1	1.45
36	Niagara Falls, NY	71,384	9,080	10.5	15.2	1.45
37	Louisville, KY	298,451	84,080	12.6	18.3	1.45
38	Port Arthur, TX	61,251	24,862	11.1	16.3	1.47
39	South Bend, IN	109,727	20,179	11.5	17.0	1.48
40	Portsmouth, VA	104,577	47,133	15.1	22.4	1.48
41	Houston, TX	1,595,138	440,257	11.1	16.5	1.49
42	Huntsville, AL	142,513	29,472	11.0	16.4	1.49
43	Birmingham, AL	284,413	158,223	11.8	17.6	1.49
44	Columbus, OH	564,871	124,880	11.2	16.8	1.50
45	Columbus, GA	169,441	57,884	12.2	18.3	1.50
46	Kansas City, MO	448,159	122,699	11.1	16.7	1.50
47	Denver, CO	492,365	59,252	10.5	15.8	1.50
48	Lansing, MI	130,414	18,075	12.2	18.5	1.52
49	Stamford, CT	102,453	15,552	9.5	14.5	1.53
50	Knoxville, TN	175,030	25,881	12.5	19.5	1.56
51	Beaumont, TX	118,102	43,237	11.2	17.5	1.56
52	Inglewood, CA	94,245	54,031	10.4	16.3	1.57
53	Newport News, VA	144,903	45,702	10.8	17.0	1.57
54	Atlanta, GA	425,022	282,912	12.4	19.6	1.58
55	Canton, OH	94,730	15,015	10.9	17.3	1.59
56	Irvington, NJ	61,493	23,429	11.4	18.1	1.59
57	Tulsa, OK	360,919	42,594	10.5	16.7	1.59
58	Galveston, TX	61,902	17,908	9.4	15.0	1.60
59	Carson, CA	81,221	23,879	10.9	17.4	1.60
60	Rochester, NY	241,741	62,332	11.3	18.1	1.60
61	Tallahassee, FL	81,548	25,981	12.7	20.4	1.61
62	Tuscaloosa, AL	75,211	26,376	11.2	18.1	1.62
63	Buffalo, NY	357,870	95,116	11.3	18.3	1.62

(Continued)

Appendix

City Ratings in Five-Year Infant Mortality Race Disparity for All U.S. Cities of 50,000 or More and 10 Percent Black, 1981–1985 (Continued)

			Population		Infant Mortality	
Rank	City	Total	Black	White	Black	Ratio
64	Oklahoma City, OK	403,213	58,702	12.6	20.5	1.63
65	Montgomery, AL	177,857	69,765	11.4	18.8	1.65
66	Toledo, OH	354,635	61,750	9.7	16.0	1.65
67	Sacramento, CA	275,741	36,866	9.1	15.1	1.66
68	Little Rock, AR	158,461	51,091	10.2	17.0	1.67
69	Paterson, NJ	137,970	47,117	10.3	17.2	1.67
70	Milwaukee, WI	636,212	146,940	10.6	17.8	1.68
71	Waterloo, IA	75,985	8,396	10.3	17.3	1.68
72	Aurora, IL	81,293	8,454	11.1	18.7	1.68
73	New Rochelle, NY	70,794	12,594	6.5	11.0	1.69
74	Chattanooga, TN	169,565	53,716	10.5	17.8	1.70
75	Philadelphia, PA	1,688,210	638,878	12.8	21.8	1.70
76	Tyler, TX	70,508	18,346	11.1	19.0	1.71
77	Warren, OH	56,629	10,273	8.7	14.9	1.71
78	Lake Charles, LA	75,226	28,556	7.8	13.4	1.72
79	Alexandria, VA	103,217	28,230	12.8	22.2	1.73
80	Jacksonville, FL	540,920	137,324	11.1	19.3	1.74
81	Mansfield, OH	53,927	8,580	13.1	22.8	1.74
82	Rockford, IL	139,712	18,372	10.3	18.1	1.76
83	Mount Vernon, NY	66,713	32,316	11.0	19.4	1.76
84	Norfolk, VA	266,979	93,987	12.7	22.4	1.76
85	Waco, TX	101,261	22,186	10.8	19.1	1.77
86	Charleston, WV	63,968	7,830	10.9	19.3	1.77
87	Omaha, NE	314,255	37,852	10.7	19.0	1.78
88	Peoria, IL	124,160	20,623	12.2	21.7	1.78
89	Shreveport, LA	205,820	84,627	10.1	18.1	1.79
90	Miami, FL	346,865	87,110	5.8	10.4	1.79
91	North Little Rock, AR	64,288	11,784	9.2	16.5	1.79
92	New Orleans, LA	557,515	308,136	10.7	19.2	1.79
93	Compton, CA	81,282	60,872	11.7	21.0	1.79
94	Greenville, SC	58,242	20,757	11.6	20.9	1.80
95	Virginia Beach, VA	262,199	26,291	11.5	20.8	1.81
96	Savannah, GA	141,390	69,267	11.8	21.4	1.81
97	Cleveland, OH	573,822	251,347	12.5	22.7	1.82
98	Macon, GA	116,896	52,054	10.9	19.9	1.83
99	Berkeley, CA	103,328	20,676	7.6	13.9	1.83
100	Providence, RI	156,804	18,546	10.2	18.7	1.83
101	Newark, NJ	329,248	191,743	12.2	22.7	1.86
102	Fayetteville, NC	59,507	24,338	12.3	22.9	1.86

Appendix (Continued)

Rank	City	Population			Infant Mortality	
		Total	Black	White	Black	Ratio
103	Dallas, TX	904,078	265,594	9.5	17.7	1.86
104	Cincinnati, OH	385,457	130,467	9.9	18.6	1.88
105	Charleston, SC	69,510	32,419	12.4	23.3	1.88
106	Flint, MI	159,611	66,124	12.5	23.5	1.88
107	Hartford, CT	136,392	46,128	13.3	25.1	1.89
108	Springfield, MA	152,319	25,209	11.7	22.1	1.89
109	Bakersfield, CA	105,611	11,079	11.1	21.1	1.90
110	East Orange, NJ	77,690	64,654	9.5	18.1	1.91
111	Mobile, AL	200,452	72,568	8.8	16.8	1.91
112	Boston, MA	562,944	126,229	10.2	19.5	1.91
113	Fort Worth, TX	385,164	87,723	11.5	22.0	1.91
114	Orlando, FL	128,291	38,385	9.2	17.6	1.91
115	Tampa, FL	271,523	68,835	11.4	21.9	1.92
116	Wilmington, DE	70,195	35,926	14.4	27.9	1.94
117	Indianapolis, IN	700,807	152,626	11.5	22.3	1.94
118	Pasadena, CA	119,374	24,591	9.4	18.3	1.95
119	Decatur, IL	94,081	13,764	13.3	25.9	1.95
120	Nashville, TN	455,651	105,942	10.2	19.9	1.95
121	Grand Rapids, MI	181,843	28,602	10.8	21.3	1.97
122	Trenton, NJ	92,124	41,843	12.3	24.3	1.98
123	Springfield, IL	99,637	10,781	13.4	26.5	1.98
124	Los Angeles, CA	2,966,850	505,208	9.9	19.7	1.99
125	Charlotte, NC	314,447	97,627	9.4	18.8	2.00
126	Yonkers, NY	195,351	20,583	11.0	22.1	2.01
127	Lexington, KY	204,165	27,121	9.6	19.4	2.02
128	Winston-Salem, NC	131,885	52,952	9.1	18.4	2.02
129	Richmond, VA	219,214	112,357	11.6	23.5	2.03
130	Pine Bluff, AR	56,636	27,797	7.5	15.2	2.03
131	Las Vegas, NV	164,674	21,054	7.2	14.6	2.03
132	Chicago, IL	3,005,072	1,197,000	11.9	24.2	2.03
133	Austin, TX	345,496	42,118	8.2	16.7	2.04
134	St. Louis, MO	453,085	206,386	10.0	20.4	2.04
135	Detroit, MI	1,203,339	758,939	11.9	24.4	2.05
136	Norwalk, CT	77,767	10,755	7.6	15.8	2.08
137	Wichita, KS	279,272	30,200	10.1	21.0	2.08
138	North Charleston, SC	62,534	15,996	10.1	21.0	2.08
139	Gainesville, FL	81,371	16,787	11.3	23.5	2.08
140	Jackson, MS	202,895	95,357	8.4	17.5	2.08
141	Longview, TX	62,762	11,981	9.6	20.2	2.10
142	Lynchburg, VA	66,743	15,791	8.8	18.8	2.14

(*Continued*)

Appendix

City Ratings in Five-Year Infant Mortality Race Disparity for All U.S. Cities of 50,000 or More and 10 Percent Black, 1981–1985 (Continued)

Rank	City	Population			Infant Mortality	
		Total	Black	White	Black	Ratio
143	Pensacola, FL	57,619	19,458	5.4	11.6	2.15
144	Hampton, VA	122,617	42,070	10.5	22.6	2.15
145	Springfield, OH	72,563	12,394	12.8	27.7	2.16
146	St. Petersburg, FL	238,647	41,000	10.1	21.9	2.17
147	Dayton, OH	203,371	75,031	10.0	21.7	2.17
148	Albany, GA	74,059	35,178	9.6	20.9	2.18
149	Lafayette, LA	81,961	22,859	8.7	19.1	2.20
150	Washington, DC	638,333	448,229	10.8	24.0	2.22
151	Kalamazoo, MI	79,722	12,429	12.5	27.8	2.22
152	Pittsburgh, PA	423,938	101,813	11.6	25.9	2.23
153	Albany, NY	101,727	16,205	9.5	21.4	2.25
154	Youngstown, OH	115,436	38,556	10.5	23.7	2.26
155	Memphis, TN	646,356	307,702	9.6	22.0	2.29
156	Joliet, IL	77,956	15,607	10.7	24.8	2.32
157	Waterbury, CT	103,266	12,051	12.7	30.1	2.37
158	Champaign, IL	58,133	7,383	7.7	18.4	2.39
159	Greensboro, NC	155,642	51,373	8.3	20.0	2.41
160	Waukegan, IL	67,653	12,482	10.0	24.1	2.41
161	Bridgeport, CT	142,546	29,878	7.4	18.1	2.45
162	Pompano Beach, FL	52,618	9,071	7.0	17.2	2.46
163	Saginaw, MI	77,508	27,601	11.5	28.3	2.46
164	Columbia, SC	101,208	40,767	8.8	22.3	2.53
165	Racine, WS	85,725	12,610	7.6	19.7	2.59
166	Raleigh, NC	150,225	41,237	10.9	28.5	2.61
167	Roanoke, VA	100,220	22,028	13.2	35.4	2.68
168	Syracuse, NY	170,105	26,767	10.8	29.1	2.69
169	Evanston, IL	73,706	15,788	8.2	22.4	2.73
170	Wichita Falls, TX	94,201	10,409	10.1	28.5	2.82
171	Monroe, LA	57,597	27,992	6.3	17.8	2.83
172	Fort Lauderdale, FL	153,279	32,219	5.8	17.4	3.00
173	West Palm Beach, FL	63,305	17,599	7.3	22.1	3.03
174	Baton Rouge, LA	219,419	80,119	7.2	21.9	3.04
175	Cleveland Heights, OH	56,438	14,059	8.6	27.2	3.16
176	Kenner, LA	66,382	9,369	6.3	31.6	5.02

Note: A five-year aggregation is used because yearly fluctuations may be misleading when single years are used.