EXAMINING THE EFFECTS OF CENSUS ADJUSTMENTS ON ESTIMATES OF WORKING-AGE UNINSURED MINORITIES IN THE UNITED STATES

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A REPORT SUBMITTED TO THE U.S. CENSUS MONITORING BOARD, PRESIDENTIAL MEMBERS
FEBRUARY 2001

 THE AUTHORS WOULD LIKE TO THANK THE COMMONWEALTH FUND FOR MAKING AVAILABLE THE DATA FROM THEIR MINORITY HEALTH SURVEY FOR THIS DATA ANALYSIS.

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Executive Summary

- This report uses data from the U.S. Census Bureau, 1987 National Medical Expenditure Survey and the 1994 Commonwealth Fund *Minority Health Survey* to estimate the impact of the 1990 census undercount on estimates of working-age uninsured African and Hispanic Americans. Our findings are reflected below.

- Due to the 1990 census undercount, health policy planners were unprepared for an additional 400,000 uninsured adults.

- Using unadjusted 1990 census numbers, the number of uninsured Americans was 28.064 million, while the adjusted count shows that 28.464 million Americans were without health insurance.

- Close to half (192,000) of the uninsured Americans missed in the 1990 census were either African American or Hispanic.

- Given that the per capita health care expenses for all sources (out of pocket, private insurance, public insurance and government payments) came to $2,400 in 1996, the difference of 400,000 uninsured Americans translated into $960,000,000 in health expenses in 1996.

- The nearly $1 billion cost of missing 400,000 uninsured adults by the census was borne by persons with private insurance, remained as uncompensated care, or in the case of for-profit health care institutions were reflected as a profit loss.

Overview

THE CENSUS UNDERCOUNT

As mandated by the U.S. Constitution, the U.S. Congress is expected to conduct a census every 10 years of the U.S. population for tax purposes.[1] As part of the enumeration process for the decennial census, it is expected that every person in the country be included in the census. Under the current system, a census is taken of persons and housing every 10 years. As such, the census questions focused on demographics, transportation, housing, employment and economic issues.[1] Data from the census is used for legislative redistricting, marketing analyses and the distribution of federal grants in aid to localities.[1]

The Census Bureau first noted a decennial census undercount in 1940.[2] It was estimated that the population projection was about "3 percent short for all males, and 13 percent below the actual figures for black men."[2] In every census since, including 2000, people were missed in the census and in every census since the undercount was first measured in 1940, minorities have been disproportionately missed. In spite of the challenges in conducting the census, it was not until the 1990 Census, that an attempt to address and adjust for the undercount was undertaken.[3,4 ,5, 6] It is reported that the 1990 Census undercounted 0.9 percent of whites, 4.4 percent of African Americans, 5.0 percent of Hispanics, 2.3 percent of Asian and Pacific Islanders and 4.5 percent of American Indians, Eskimos and Aleuts. In addition, it was reported that 3.2 percent of children were undercounted[7].

The reasons offered for this gap in coverage included the respondent's lack of familiarity with the forms, the unwillingness of census workers to go to some communities, distrust of the census takers by community residents, language barriers, and the difficulty in reaching homes and individuals relocating between census years.[2, 4] Ethnic minorities are particularly concerned about this undercount because of the potential losses in federal aid to local communities that could result. A study by the U.S. Conference of Mayors reported that 34 cities lost $536 million in federal and state aid as a result of the 1990 census undercount.[8] While the Census Bureau has implemented strategies for addressing the issue of the census undercount in 2000, the purpose of this study is to estimate the impact of such an undercount on health issues related to minorities in the United States.

THE RELEVANCE OF THE UNDERCOUNT TO STUDIES OF THE UNINSURED

While the U.S. Census collects social and economic data, the census does not collect extensive data on the health of Americans. The primary reason is that it might further jeopardize the census response rate by adding more questions to the census form. Thus the most practical solution to this problem has been the collection of health data from a sample of U.S. residents and then weighting that data (using the U.S. Census counts) to make generalities about the impact of these findings for the U.S. population. Two examples of such a process are data collected by the U.S. Department of Health and Human Services, National Center for Health Statistics (NCHS), and data collected by the U.S. Dept. of Health and Human Services, Agency for Health Care Research and Quality (AHRQ). The National Centers for Health Statistics, routinely publishes data from the National Health Interview Survey, the National Ambulatory Medical Care Survey, the National Hospital Ambulatory Medical Care Survey, the National Survey of Family Growth and other health studies. These studies are typically disseminated via their research series, public use files, and the annual publication *Health United States***,** which serves as a barometer of the Nation's Health (see http://www.cdc.gov/nchs/) .

Likewise, the Agency for Health Care Research and Quality (AHRQ) has collected data from a sample of U.S. Citizens, and then weighted the data (using U.S. Census Counts) to make generalizations about these findings to the U.S. population (See for example, *National Medical Expenditure Survey Household Survey Final Methodology Report*[9]). As in the case of NCHS, AHRQ also releases the data to the public to be used in conducting analyses (see the web site: http://www.ahrq.gov/ for examples of such analyses). In particular, they have collected data on the costs of medical care, health insurance, employment and access to care to use in federal policy analysis. Examples of such analyses can be found through reviewing studies conducted by the U.S General Accounting Office (GAO).

For example, GAO was commissioned by the Chairman of the Committee on Labor and Human Resources in the U.S. Senate to estimate the ability of the near elderly to obtain health insurance. This study relied on data from the Agency for Health Care Policy and Research, the Census Bureau and the National Centers for Health Statistics to generate policy analyses for Congress.[10] This study found that "since fewer employers are offering health coverage as a benefit to future retirees, the proportion of the near elderly with access to affordable health insurance could decline. The resulting increase in uninsured elderly would be exacerbated by demographic trends, since 55 to 64 year olds represent one of the fasting growing segments of the U.S. population." In another GAO study commissioned for Congress (that used data from the Census Bureau and the National Center for Health Statistics), it was found that "individual health insurance covers a significant minority of the U.S. population. For 10.5 million Americans under 65 years of age, 4.5 percent of the non elderly population, individually purchased health insurance was their only sources of health coverage in 1994".[11] More notable examples of this activity include providing data for the Catastrophic Health Insurance Act in the 1980s and data for the Comprehensive Health Care Reform Plan in the mid 1990s.

As implied by the information provided above, health care researchers and policy analysts routinely use data collected from samples of U.S. citizens that are generalized to the U.S. Population. This data is then used to provide information for the monitoring of the nation's health and for the formulation of policy analyses. Several things are implied in this process:

1. It is necessary to collect data from a sample of respondents because it is too expensive to add the items to the census;
2. Such a sample is perceived to be accurate because it comes from an accurate census;
3. Because such a sample is perceived to be accurate it can be used to help Congress in estimating the costs of health care and the magnitude of the impact of health care on segments of the population.

But what happens to these analyses if there is a census undercount? Since some of these analyses are based on the counts provided in the census, it is quite possible then that the magnitude of these findings are under-estimated, thus the policies that are generated based on these counts would miss some of the targeted population. Thus for example, the GAO estimate of 10.5 million workers who have individually purchased private insurance would be an underestimate of the magnitude of the problem. Given the reliance on samples to review health care issues, this study will use the data from the census undercount to estimate the impact of the data on estimates of uninsured African American and Hispanics.

DESCRIPTION OF ANALYTICAL APPROACH

The purpose of this study is to use 1990 data from the U.S. Census Bureau Public Law 94-171 data and the 1994 Commonwealth Fund Minority Health Survey (CMHS) to estimate the magnitude of uninsured minorities. Data from the 1987 National Medical Expenditure Study (NMES), the U.S. Census Bureau (the P.L. 94-171[12] tabulations of the adjusted and unadjusted census count for persons over 18 years of age) and the Commonwealth Fund Minority Health Survey (CMHS) were used for these analyses (See methods section in the appendix for further information about these sources of data). Data from NMES is provided as a baseline to gauge the impact of the 1990 census undercount, while data from the 1994 Commonwealth Minority Health Survey is provided because of its breadth of coverage of the issues of minority health as reported in the recent publication entitled Minority Health in America: Findings and Policy Implications from the Commonwealth Fund Minority Health Survey.[13]

The analysis will proceed by re-computing the sampling weights from the 1994 Minority Health Survey so that they match the unadjusted and adjusted P.L. 94-171 population totals for adults over 18 by race and ethnicity. This data will then be used to generate estimates of the numbers of African Americans and Hispanics who are uninsured. Socio-demographic factors such as gender, employment status, income level, and education level are used wherever possible to distinguish between sub groups of African Americans and Latinos. Given that the goal is to depict the magnitude of the impact of adjusting for the census undercount on these sub-populations, charts with trend lines are used to graphically highlight the direction of impact for these scenarios.

Detailed tables displaying the numbers used in the summary trend charts are also included in the appendix of the report to supplement the data highlighted below. Summarized below is a listing of the key analytical measures (dependent variables) and control variables to be examined in looking at the differences by race and ethnicity.

Key analytical measure (dependent variable):

- Number of uninsured/by race/ethnicity

Control variables:

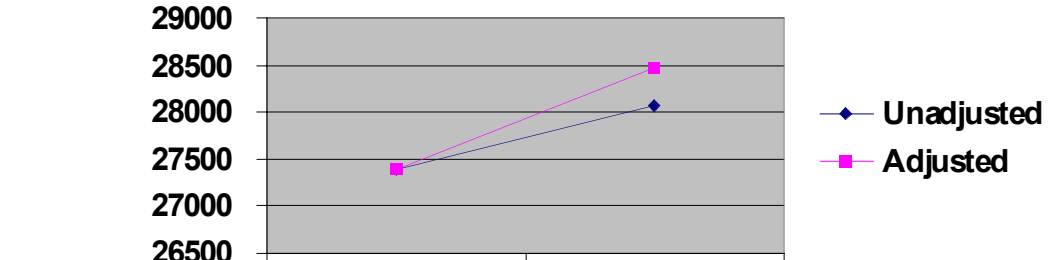
- Employment status
- Perceived health status
- Gender
- Age
- Region
- Income
- Marital status

Key Findings

OVERALL ESTIMATES OF THE UNINSURED

There were slightly over 147.1 million working age (ages 18-64) Americans in the United States in 1987. If one uses the official count (P.L. 94-171) from the 1990 census, the reported population for this age group was 154.7 million in 1990, while the adjusted counts for the population indicate that there were 156.4 million adults between the ages of 18 and 64 years of age. In 1987 there were 27.388 million working age Americans who were uninsured (Figure 1). By 1990 this number had increased to anywhere between 28.064 million (unadjusted) and 28.464 million adults (adjusted).

Figure 1. Growth (in thousands) in the number of uninsured working age (18-64) adults between 1987 and 1990, adjusting for census undercount

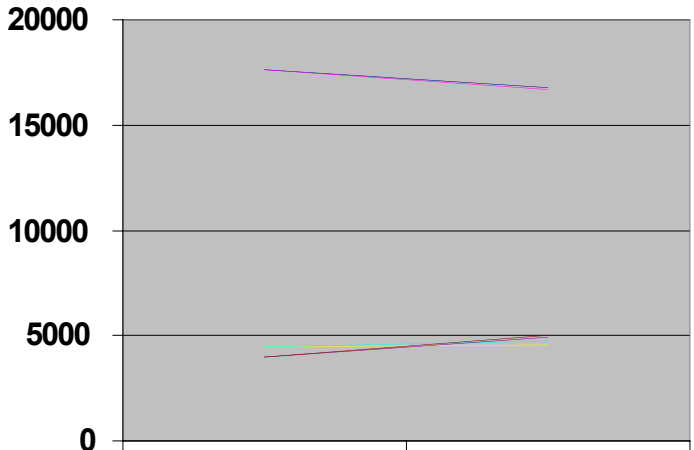


	1987	1990
Unadjusted	27388	28064
Adjusted	27388	28464

Note: 1987 Numbers are based on data from the 1987 National Medical Expenditure Survey (Source: Agency for Health Care Research and Quality). 1990 Adjusted and Unadjusted numbers are based on data from the U.S. Census Bureau and the 1994 Commonwealth Fund Minority Health Survey.

There are two factors that influence these findings for African Americans and Hispanics: their disproportional representation among those undercounted in the census and among the uninsured. The reasons for their disproportionate representation among the uncounted is that they typically live in households that are hard to reach by census workers. At the same time they are more likely to be uninsured because they are more likely to be represented by factors that are correlated with the lack of insurance poverty and unemployment.[14] [15] Based on these factors, it is expected that the census undercount would disproportionately effect minorities in the United States. Thus, as indicated in figure 2, while there was a decline in the number of uninsured whites between 1987 and 1990, there was an increase in the number of uninsured African Americans and Hispanics during the same period.

Figure 2. Growth (in thousands) in the number of uninsured working age adults (18-64) between 1987 and 1990, adjusting for census undercount by race/ethnicity



	1987	1990
Whites-unadjusted	17669	16746
Whites adjusted	17669	16663
Blacks unadjusted	4491	4585
Blacks adjusted	4491	4697
Hispanics unadjusted	4011	4914
Hispanics adjusted	4011	5007

Notes: Whites refers to Non Hispanic Whites, Blacks refers to Non Hispanic Blacks. 1987 Numbers are based on data from the 1987 National Medical Expenditure Survey (Source: Agency for Health Care Research and Quality). 1990 Adjusted and Unadjusted numbers are based on data from the U.S. Census Bureau and the 1994 Commonwealth Fund Minority Health Survey.

One of the factors that influenced the increase in the number of uninsured African Americans and Hispanics is the decrease in employment-based health insurance, especially for Hispanic males.[16] However, the magnitude of the increase in the number of uninsured minorities is compounded by the census undercount. For Hispanics, the number of uninsured increased from 4.011 million in 1987 to 4.914 million (unadjusted) and 5.007 million (adjusted). At the same time, there was only a small increase in the number of uninsured African Americans from 4.491 million to 4.585 million (unadjusted) and 4.697 million (adjusted).

So then, what difference does a few hundred thousand make? It depends. A study conducted by the Congressional Research Service reported that in 1986, 316.2 billion dollars was spent in health care expenditures (this included out of pocket expenses, employer group coverage, individual insurance, Medicare, Medicaid and other government payments).[17] This came to $1,323 in expenses per person in 1986. This translates into $529.2 million dollars for these additional 400,000 persons in 1986 dollars. Using more recent data from AHRQ (which reports the average expense per person in

1996 to be $2,400[18]), it would cost $960,000,000 to meet the needs of these persons in 1996. The nearly 1 million dollars cost of missing 400,000 uninsured adults in the census was borne by persons with private insurance, remained uncompensated care or in the case of for-profit health care institutions would be reflected as a profit loss. Based on this information, even the smallest variation in estimates can have large implications for both policy development and the actual provision of care within health care systems.

ESTIMATES OF UNINSURED AFRICAN AMERICANS AND HISPANICS BY SOCIODEMOGRAPHIC CHARACTERISTICS

One of the issues that have come to the forefront in the dilemma of the census undercount is that the magnitude of the undercount varies by state (and thus by region). For example, the P.L. 94-171 data indicates that the undercount was between 2 and 3 percent for the states in the south[i] and west[ii] and under 2 percent for the rest of the county. As a result, it is also expected that there would be some variations within ethnic minorities in the effect of the undercount on the number of uninsured minorities by region.

Displayed in table 1 (and tables 2a and 2b of the appendix) are the estimates of the uninsured based on region. If one looks solely at the differences by region between the adjusted and unadjusted census counts, one only sees a difference of about 50,000 persons per location. If it were not for the effect of insurance, one would have expected a larger variation among those living in the south or the west. However, like the overall count by race, the adjusted counts by race and region are affected by the rate of un-insurance within each region. The 1987 and 1990 data (tables 2a and 2b) indicate that the actual percent of uninsured varies by region. For example, 22.7 percent of the Hispanics living in the Midwest were uninsured, while 43.7 percent of the Hispanics living in the west were uninsured. Thus, the number of uninsured by region is influenced by both the rate of uninsured in that locality as well as the population undercounts.

Therefore, policy making nationally may best be served by close investigations of regional variations in the rate of uninsured and the population undercount.

[i] As defined by the U.S. Census Bureau, the following states are located in the south (South Atlantic, East South Central and West South Central regions): Delaware, Florida, Georgia, Maryland, District of Columbia, North Carolina, South Carolina, Virginia, West Virginia, Alabama, Kentucky, Tennessee, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas.

[ii] As defined by the U.S. Census Bureau, the following states are located in the west (Mountain and Pacific regions): Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming, Alaska, California, Hawaii, Oregon, and Washington.

Table 1.Growth in the Number of Uninsured of working age (18-64) U.S. adults, by race/ethnicity and region, 1987-1990

Race/Ethnicity and Insurance Status	1987 population in thousands	1990 Unadjusted Population In thousands	1990 Adjusted Population In thousands
White			
Northeast	2,644	2,923	2,938
Midwest	3,897	2,807	2,821
South	7,184	6,901	6,935
West	3,943	4,032	4,052
Black			
Northeast	513	1,131	1,168
Midwest	506	525	542
South	3,079	2,604	2,689
West	392	288	297
Hispanic			
Northeast	375	719	732
Midwest	303	194	198
South	1,668	1,702	1,727
West	1,665	2,298	2,349

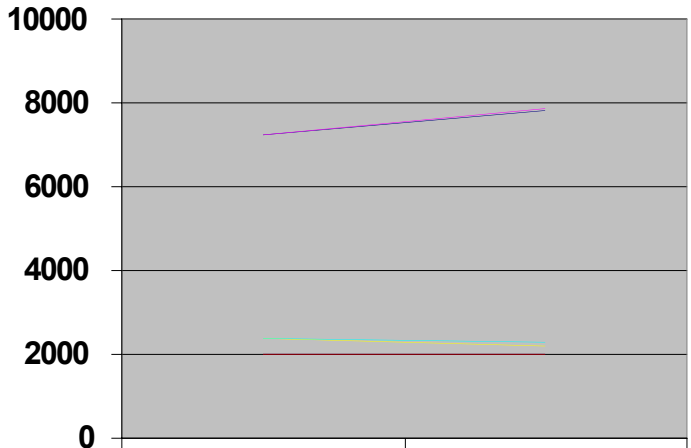
Notes: Whites refers to Non Hispanic Whites, Blacks refers to Non Hispanic Blacks. 1987 Numbers are based on data from the 1987 National Medical Expenditure Survey (Source: Agency for Health Care Research and Quality). 1990 Adjusted and Unadjusted numbers are Based on data from the U.S. Census Bureau and the 1994 Commonwealth Fund Minority Health Survey

Reports on the characteristics of the uninsured typically attempt to look at additional socio-demographic factors (income, perceived health status, income, employment status, marital status, etc.) to detect variations among factors that are correlated with the ability to obtain insurance. In the figures which follow and the detailed tables in the appendix, estimates of the uninsured are provided for these sub-populations. As indicated earlier, income was one of the factors that was correlated with the chances of being uninsured. In 1987 sixty percent of the uninsured were persons who earned less than $5.00 per hour. [19]

Lower income uninsured Americans typically reflect those in jobs without health insurance benefits or the non working who are not eligible for Medicaid or other public insurance. As reported in figure 3, while there was an increase in the number of whites

with family incomes under $15,001 who are uninsured, there is a decrease for African Americans and possibly a decrease for Hispanics (depending on whether one goes by the adjusted or unadjusted counts). The number of uninsured whites whose families earned less than $15,001 increased from 7.245 million in 1987 to slightly over 7.8 million (7.825 unadjusted and 7.864 million (adjusted)) in 1990. At the same time, it declined for African Americans whose families earned less than $15,001 from 2.398 million in 1987 to either 2.198 million (unadjusted 1990 counts) or 2.270 million (adjusted). For Hispanics in families with income under $15,001 the number of uninsured shifted from 2.017 million in 1987 to 1.983 million (unadjusted) or 2.021 million (adjusted) in 1990.

Figure 3. Growth (in thousands) in the number of low income ($15001) uninsured working age (18-64) adults between 1987 and 1990, adjusting for census undercount by race/ethnicity



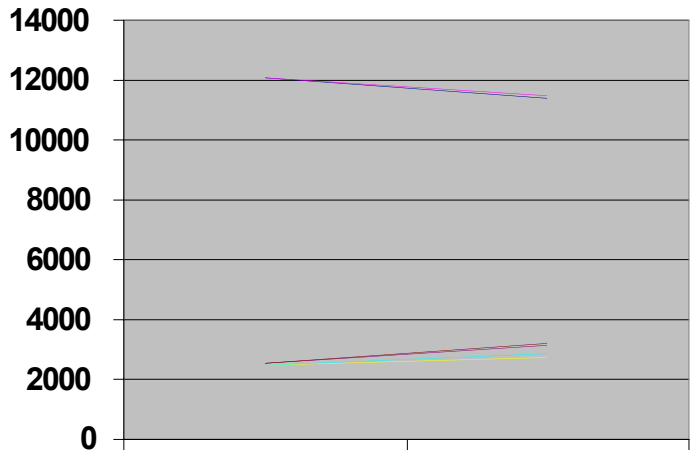
	1987	1990
Whites-unadjusted	7245	7825
Whites adjusted	7245	7864
Blacks unadjusted	2398	2198
Blacks adjusted	2398	2270
Hispanics unadjusted	2017	1983
Hispanics adjusted	2017	2021

Notes: Whites refers to Non Hispanic Whites, Blacks refers to Non Hispanic Blacks. 1987 Numbers are based on data from the 1987 National Medical Expenditure Survey (Source: Agency for Health Care Research and Quality). 1990 Adjusted and Unadjusted numbers are Based on data from the U.S. Census Bureau and the 1994 Commonwealth Fund Minority Health Survey

Like income, employment status is an important factor to consider when examining the counts of the uninsured (figures 4 and 5). Private (mostly employment based) health insurance currently covers close to 74 percent of the persons under age 65. [16, 20] In support of the general trend reported earlier regarding the growth of the uninsured by race/ethnicity, the number of employed whites who were uninsured decreased between

1987 and 1990 (from 12.049 million to between 11.394 and 11.451 million), while it increased for African Americans (from 2.466 million to between 2.746 and 2.836 million) and Hispanics (from 2.528 to between 3.155 and 3.210 million).

Figure 4. Growth (in thousands) in the number of employed uninsured working age (18-64) adults between 1987 and 1990, adjusting for census undercount by race/ethnicity

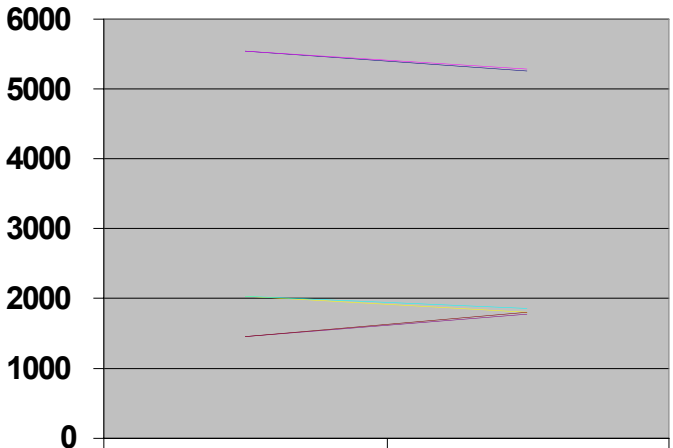


	1987	1990
Whites-unadjusted	12049	11394
Whites adjusted	12049	11451
Blacks unadjusted	2466	2746
Blacks adjusted	2466	2836
Hispanics unadjusted	2528	3155
Hispanics adjusted	2528	3210

Notes: Whites refers to Non Hispanic Whites, Blacks refers to Non Hispanic Blacks. 1987 Numbers are based on data from the 1987 National Medical Expenditure Survey (Source: Agency for Health Care Research and Quality). 1990 Adjusted and Unadjusted numbers are Based on data from the U.S. Census Bureau and the 1994 Commonwealth Fund Minority Health Survey.

Likewise the number of white uninsured who were not employed declined from 5.553 million in 1987 to between 5.269 million and 5.295 million in 1990 (figure 5). Similarly the number of uninsured African Americans who were not employed decreased from 2.026 million in 1987 to between 1.802 and 1.860 million in 1990, while the number of uninsured Hispanics increased from 1.451 million and between 1.759 and 1.797 million in 1990.

Figure 5. Growth (in thousands) in the number of not employed uninsured working age (18-64) adults between 1987 and 1990, adjusting for census undercount by race/ethnicity

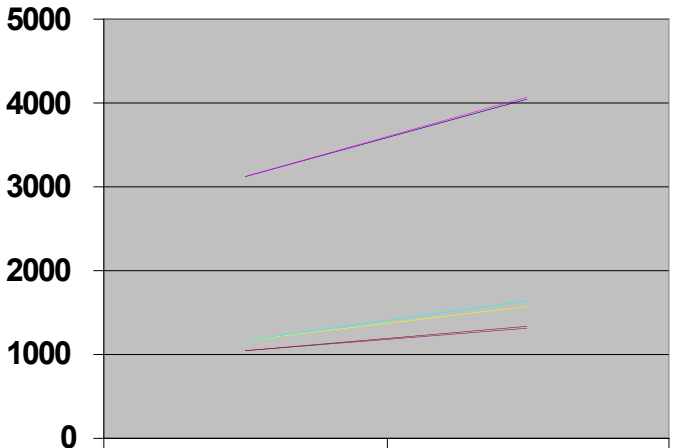


	1987	1990
Whites-unadjusted	5533	5269
Whites adjusted	5533	5295
Blacks unadjusted	2026	1802
Blacks adjusted	2026	1860
Hispanics unadjusted	1451	1759
Hispanics adjusted	1451	1797

Notes: Whites refers to Non Hispanic Whites, Blacks refers to Non Hispanic Blacks. 1987 Numbers are based on data from the 1987 National Medical Expenditure Survey (Source: Agency for Health Care Research and Quality). 1990 Adjusted and Unadjusted numbers are Based on data from the U.S. Census Bureau and the 1994 Commonwealth Fund Minority Health Survey

While other data is presented in the appendix, the final factor included in the body of this report is the issue of perceived health status. Perceived health status is typically used to reflect the need for medical services, thus persons who are seen as being in fair or poor health would be seen as needing more care than others. Contrary to the trend reported in the other charts, when one looks at perceived health status, one sees an increase in the number of uninsured among whites, African Americans and Hispanics (figure 6). The number of uninsured whites who reported themselves being in fair or poor health increased from 3.119 million in 1987 to between 4.051 and 4.070 million in 1990.

Figure 6. Growth (in thousands) in the number of uninsured working age (18-64) adults reporting to be in fair or poor health between 1987 and 1990, adjusting for census undercount by race/ethnicity



	1987	1990
Whites-unadjusted	3119	4051
Whites adjusted	3119	4070
Blacks unadjusted	1166	1573
Blacks adjusted	1166	1644
Hispanics unadjusted	1047	1313
Hispanics adjusted	1047	1337

Notes: Whites refers to Non Hispanic Whites, Blacks refers to Non Hispanic Blacks. 1987 Numbers are based on data from the 1987 National Medical Expenditure Survey (Source: Agency for Health Care Research and Quality). 1990 Adjusted and Unadjusted numbers are Based on data from the U.S. Census Bureau and the 1994 Commonwealth Fund Minority Health Survey

At the same time the number of uninsured African Americans who reported being in fair or poor health increased from 1.166 million in 1987 to between 1.593 and 1.644 million in 1990. Finally, the number of uninsured Hispanics who reported being in fair or poor health increased from 1.047 million in 1987 to between 1.313 million and 1.337 million in 1990. These data provide key indicators that perceived fair or poor health status greatly influences upward the demand for care among the uninsured who compose a larger percentage of the undercount by our definition. These demands, in an environment of under-developed policies in this area, could have significant effects on the outcomes and access to care for these vulnerable groups.

SUMMARY AND IMPLICATIONS

This study was initiated because of the reliance of researchers on data from surveys of the uninsured to formulate health policies. Data from the Current Population Survey, the National Health Interview Survey and the Medical Expenditure Panel Survey are just a few examples of sources of data that are used by Congress, federal agencies and other policy making institutions to estimate the impact of the lack of insurance on health care financing. These analyses typically rely on data from the U.S. Census Bureau to generate their estimates of the uninsured.

We found that the estimate of the number of uninsured in 1990 varied by 400,000 working age Americans between the official and the adjusted 1990 census count. Close to half (192,000) of the variation in the estimate of the uninsured affected African Americans and Hispanics. While 400,000 may seem like a small number in comparison to the total population, it is estimated that the expenditures for this population comes to $529.2 million dollars in 1986 and $960 million in 1996. Given the disproportionate representation of African Americans and Hispanics in the variations of these estimates, it is expected that policies that do not adjust for the undercount would have a disproportionate negative effect on these groups. Further, the ripple effects of under developed policies would both impact an already strained safety-net and would result in unplanned and unforeseen financial burdens on the current system of care and the American public at large. Finally, lack of attention to the regional variations in the undercount have disproportionate effects on state and local policy making efforts and hence compound the problem further at these levels.

Appendix

DATA ON HEALTH INSURANCE STATUS OF WORKING AGE AFRICAN AMERICANS AND HISPANICS BY SELECTED CHARACTERISTICS

For the following 10 charts, Whites refers to Non Hispanic Whites and Blacks refers to Non-Hispanic Blacks. The 1987 numbers are based upon data from the 1987 National Medical Expenditure Survey, conducted by the Agency for Health Care Research and Quality. Unadjusted and adjusted populations are based upon 1990 census data and the 1994 Commonwealth Fund Minority Health Survey.

Table 1. Health insurance status of working age (18-64) U.S. adults, by race/ethnicity 1987-1990

Race/Ethnicity and Insurance Status	1987 Percent	1987 population in thousands	1990 Percent	1990 Unadjusted Population In thousands	1990 Adjusted Population In thousands
White					
Any private	81.1	93,014	77.5	90,383	90,832
Public	3.5	3,967	8.2	9,568	9,616
Uninsured	15.4	17,669	14.3	16,663	16,746
Black					
Any private	55.3	9,103	57.1	10,333	10,861
Public	17.4	2,854	17.1	3,002	3,100
Uninsured	27.3	4,491	25.9	4,598	4,697
Hispanic					
Any private	53.3	6,069	52.1	6,763	6,877
Public	11.5	1,311	10.0	1,292	1,316
Uninsured	35.2	4,011	37.9	4,914	5,007

Table 2a. Health insurance status of working age (18-64) U.S. adults, by race/ethnicity and region, 1987-1990

Race/Ethnicity and Insurance Status	1987 Percent	1987 population in thousands	1990 Percent	1990 Unadjusted Population In thousands	1990 Adjusted Population In thousands
Region	North East				
White					
Any private	85.1	20,628	81.6	20,487	20,588
Public	4.0	966	6.7	1,692	1,700
Uninsured	10.9	2.644	11.6	2,923	2,938
Black					
Any private	60.6	1,709	53.1	2,371	2,448
Public	21.2	598	21.5	959	990
Uninsured	18.2	513	25.4	1,131	1,168
Hispanic					
Any private	60.5	1,108	54.1	1,287	1,308
Public	19.0	349	15.6	370	376
Uninsured	20.5	375	30.3	719	732
Region	Midwest				
White					
Any private	83.5	26,831	80.6	25,656	25,783
Public	4.4	1,423	10.5	3,351	3,367
Uninsured	12.1	3,897	8.8	2,807	2,821
Black					
Any private	52.9	1,490	62.4	1,597	1,649
Public	29.1	818	17.0	436	450
Uninsured	18.0	506	20.5	525	542
Hispanic					
Any private	57.1	643	66.8	572	581
Public	16.0	180	10.5	90	90
Uninsured	26.9	303	22.7	194	198

Table 2b. Health insurance status of working age (18-64) U.S. adults, by race/ethnicity and region, 1987-1990

Race/Ethnicity and Insurance Status	1987 Percent	1987 population in thousands	1990 Percent	1990 Unadjusted Population In thousands	1990 Adjusted Population In thousands
Region	South				
White					
Any private	77.4	28,080	74.4	27,396	27,532
Public	2.4	998	6.8	2,512	2,524
Uninsured	19.8	7,184	18.7	6,901	6,935
Black					
Any private	53.6	5,058	56.6	5,041	5,206
Public	13.7	1,297	14.2	1.266	1,308
Uninsured	32.6	3,079	29.2	2,604	2,689
Hispanic					
Any private	49.8	1,962	53.4	2,392	2,424
Public	7.9	312	8.6	384	390
Uninsured	42.3	1,668	38.0	1,702	1,727
Region	West				
White					
Any private	79.4	17,473	73.6	16,844	16,928
Public	2.6	579	8.8	2,014	2,024
Uninsured	17.9	3,943	17.6	4,032	4,052
Black					
Any private	61.3	845	62.0	1,024	1,057
Public	10.2	141	20.6	340	352
Uninsured	28.4	392	17.4	288	297
Hispanic					
Any private	52.4	2,355	47.8	2,513	2,564
Public	10.5	470	8.5	449	459
Uninsured	37.1	1,665	43.7	2,298	2,349

Table 3a. Health insurance status of working age (18-64) U.S. adults, by race/ethnicity and income, 1987-1990

Race/Ethnicity and Insurance Status	1987 Percent	1987 population in thousands	1990 Percent	1990 Unadjusted Population In thousands	1990 Adjusted Population In thousands
Income	<$15,001				
White					
Any private	46.7	8,760	38.2	8,138	8,178
Public	14.7	2,760	25.1	5,355	5,382
Uninsured	38.6	7,245	36.7	7,825	7,864
Black					
Any private	28.4	1,811	25.8	1,332	1,376
Public	33.9	2,158	31.5	1,625	1,678
Uninsured	37.7	2,398	42.6	2,198	2,270
Hispanic					
Any private	25.3	948	23.1	802	816
Public	21.0	786	19.8	688	700
Uninsured	53.8	2,017	57.1	1,983	2,021
Income	$15,001-25,000				
White					
Any private	77.4	14,689	73.3	13,263	13,329
Public	3.7	710	8.1	1,459	1,466
Uninsured	18.9	3,577	18.7	3,381	3,397
Black					
Any private	59.4	1,909	60.5	2,310	2,385
Public	11.9	382	9.6	368	380
Uninsured	28.7	921	29.9	1,143	1,180
Hispanic					
Any private	51.5	1,300	39.8	1,177	1,197
Public	11.2	284	9.1	270	274
Uninsured	37.3	942	51.1	1,512	1,537

Table 3b. Health insurance status of working age (18-64) U.S. adults, by race/ethnicity and income, 1987-1990

Race/Ethnicity and Insurance Status	1987 Percent	1987 population in thousands	1990 Percent	1990 Unadjusted Population In thousands	1990 Adjusted Population In thousands
Income	$25,001-50,000				
White					
Any private	88.3	37,982	86.7	37,417	37,602
Public	1.1	455	4.7	2,017	2.027
Uninsured	10.6	4,580	8.6	3,710	3,728
Black					
Any private	77.4	3,636	81.1	4,083	4,216
Public	5.1	239	9.5	480	495
Uninsured	17.5	824	9.4	475	490
Hispanic					
Any private	72.5	2,388	72.2	2,812	2,861
Public	5.9	193	4.2	164	168
Uninsured	21.6	712	23.6	921	936
Income	$50,001+				
White					
Any private	94.0	31,124	92.7	31,565	31,722
Public	0.1	40	2.2	737	741
Uninsured	5.9	1,941	5.1	1,748	1,757
Black					
Any private	81.7	1,716	64.7	2,308	2,383
Public	3.0	64	14.8	529	546
Uninsured	15.2	320	20.5	732	756
Hispanic					
Any private	81.1	1,395	74.7	1,971	2,003
Public	2.2	38	6.4	170	173
Uninsured	16.6	286	18.9	498	512

Table 4. Health insurance status of working age (18-64) U.S. adults, by race/ethnicity and employment status, 1987-1990

Race/Ethnicity and Insurance Status	1987 Percent	1987 population in thousands	1990 Percent	1990 Unadjusted Population In thousands	1990 Adjusted Population In thousands
Employment Status	Employed				
White					
Any private	85.4	75,173	82.8	73.038	73,398
Public	0.9	780	4.3	3,752	3,771
Uninsured	13.7	12,049	12.9	11,394	11,451
Black					
Any private	73.3	7,625	68.1	8,453	8,729
Public	3.0	311	9.8	1,215	1,254
Uninsured	23.7	2,466	22.1	2,746	2,836
Hispanic					
Any private	64.8	5,135	60.7	5,605	5,702
Public	3.3	259	5.1	473	485
Uninsured	31,9	2,528	34.2	3,155	3,210
Employment Status	Not employed				
White					
Any private	67.2	17,840	61.0	17,347	17,433
Public	12.0	3,187	20.5	5,816	5,844
Uninsured	20.8	5,533	18.5	5,269	5,295
Black					
Any private	24.4	1,478	30.6	1,580	1,631
Public	42.1	2,543	34.6	1,787	1,845
Uninsured	33.5	2,026	34.9	1,802	1,860
Hispanic					
Any private	27.2	934	31.0	1,158	1,175
Public	30.6	1,052	21.9	819	831
Uninsured	42.1	1,451	47.1	1,759	1,797

Table 5. Health insurance status of working age (18-64) U.S. adults, by race/ethnicity and perceived health status, 1987-1990

Race/Ethnicity and Insurance Status	1987 Percent	1987 population in thousands	1990 Percent	1990 Unadjusted Population In thousands	1990 Adjusted Population In thousands
Perceived Health Status	Excellent/Good				
White					
Any private	83.2	82,303	81.4	79,393	79,787
Public	2.1	2,114	5.7	5,564	5,591
Uninsured	14.7	14,550	12.9	12,613	12.676
Black					
Any private	60.8	7.450	61.9	8,415	8,690
Public	12.1	1,477	16.3	2,215	2,287
Uninsured	27.1	3,324	21.8	2.955	3,052
Hispanic					
Any private	57.9	4,981	56.1	5,527	5,621
Public	7.6	650	7.6	752	765
Uninsured	34.5	2,964	36.3	3,375	3,642
Perceived Health Status	Fair/Poor				
White					
Any private	68.3	10,710	57.7	10.990	11,045
Public	11.8	1,852	21.0	4.004	4,024
Uninsured	19.8	3,119	21.3	4.051	4,070
Black					
Any private	39.4	1,653	40.2	1,602	1,655
Public	32.4	1,378	19.8	787	813
Uninsured	27.8	1,166	40.0	1,593	1,644
Hispanic					
Any private	38.9	1,087	40.0	1,236	1,256
Public	23.6	661	17.5	541	550
Uninsured	37.5	1,047	42.5	1,313	1,337

Table 6. Health insurance status of working age (18-64) U.S. adults, by race/ethnicity and age, 1987-1990

Race/Ethnicity and Insurance Status	1987 Percent	1987 population in thousands	1990 Percent	1990 Unadjusted Population In thousands	1990 Adjusted Population In thousands
Age	18-24 years				
White					
Any private	71.8	13,989	66.7	10,602	10.654
Public	3.7	731	16.0	2,543	2,556
Uninsured	24.5	4,771	17.3	2,742	2,755
Black					
Any private	40.5	1,463	42.5	1,085	1,121
Public	18.4	665	23.1	589	609
Uninsured	41.1	1.482	34.4	879	908
Hispanic					
Any private	43.0	1,131	45.6	1,056	1,080
Public	11.4	300	9.5	220	225
Uninsured	45.6	1,197	44.8	1,037	1,061
Age	25-50 years				
White					
Any private	82.5	57,806	79.8	59,631	59,926
Public	3.2	2,251	6.3	4,708	4,731
Uninsured	14.3	9.988	13.9	10,419	10,471
Black					
Any private	59.7	5,871	59.9	7,023	7,252
Public	16.2	1,596	14.8	1,736	1,792
Uninsured	24.1	2,364	25.3	2,971	3,068
Hispanic					
Any private	57.1	4,029	52.3	4,483	4,551
Public	10.2	721	10.2	876	893
Uninsured	32.6	2,301	37.5	3,216	3,274
Age	51-64 years				
White					
Any private	84.5	2,122	77.6	20,151	20,251
Public	3.9	984	8.9	2,317	2,328
Uninsured	11.6	2,910	13.5	3,502	3,520
Black					
Any private	58.8	1,769	58.3	1,924	1,987
Public	19.7	593	20.5	676	699
Uninsured	21.4	644	21.2	698	721
Hispanic					
Any private	53.0	909	58.8	1,224	1,240
Public	17.0	290	9.4	196	198
Uninsured	30.0	513	31.8	661	671

Table 7. Health insurance status of working age (18-64) U.S. adults, by race/ethnicity and marital status, 1987-1990

Race/Ethnicity and Insurance Status	1987 Percent	1987 population in thousands	1990 Percent	1990 Unadjusted Population In thousands	1990 Adjusted Population In thousands
Marital Status					
	Never Married				
White					
Any private	73.5	18,844	66.1	29,441	29,587
Public	5.0	1,285	12.0	5,354	5,381
Uninsured	21.5	5,511	21.8	9,721	9,769
Black					
Any private	40.9	2,531	49.3	4,754	4,910
Public	24.6	1,523	20.9	2,017	2,082
Uninsured	34.5	2,140	29.8	2,867	2,962
Hispanic					
Any private	42.9	1,325	47.6	2,521	2,567
Public	15.3	472	13.5	713	725
Uninsured	41.9	1,294	39.0	2,064	2,102
Marital Status	Married				
White					
Any private	83.4	74,064	84.5	60,621	60,922
Public	3.0	2,675	5.9	4.214	4,235
Uninsured	13.6	12,053	9.7	6,942	6,977
Black					
Any private	64.1	6,559	66.7	5,265	5,436
Public	13.0	1,331	12.3	972	1,004
Uninsured	22.8	2,337	20.9	1,652	1,706
Hispanic					
Any private	57.4	4,739	55.3	4,242	4,311
Public	10.2	839	7.6	579	591
Uninsured	32.5	2,864	37.2	2,850	2,904

Table 8. Health insurance status of working age (18-64) U.S. adults, by race/ethnicity and gender 1987-1990

Race/Ethnicity and Insurance Status	1987 Percent	1987 population in thousands	1990 Percent	1990 Unadjusted Population In thousands	1990 Adjusted Population In thousands
Gender	Male				
White					
Any private	81.3	45,360	76.8	44,328	44,653
Public	2.5	1,382	7.3	4,213	4,234
Uninsured	16.3	9,079	15.9	9,203	9,248
Black					
Any private	56.9	4,200	59.9	4,745	4,900
Public	11.6	858	14.0	1,111	1,148
Uninsured	31.5	2,322	26.0	2,060	2,128
Hispanic					
Any private	55.4	3,154	55.9	3,640	3,702
Public	6.7	384	7.8	510	522
Uninsured	37.8	2,154	36.2	2,358	2,398
Gender	Female				
White					
Any private	81.0	47,654	78.2	45,951	46,179
Public	4.4	2,588	9.1	5,355	5,381
Uninsured	14.6	8,590	12.7	7,460	7,497
Black					
Any private	54.1	4,903	54.7	5,288	5,461
Public	22.0	1,996	19.5	1,889	1,951
Uninsured	23.9	2,167	25.7	2,488	2,569
Hispanic					
Any private	51.1	2,915	48.3	3,123	3,175
Public	16.3	927	12.1	788	794
Uninsured	32.6	1,857	39.6	2,556	2,608

STUDY DESIGN AND DEFINITIONS OF KEY VARIABLES

The data for this study comes from the 1994 Commonwealth Fund Minority Health Survey (CMHS), conducted by Lou Harris and Associates for the Commonwealth Fund (Lou Harris and Associates, 1994[21]) and from the 1987 National Medical Expenditure Survey, conducted by the Agency for Health Care Policy and Research.[22] NMES was a national probability survey of the non-institutionalized population (of all persons) of the United States (n=38,446). The 1987 NMES was fielded in four rounds at approximately four month intervals, with a fifth short telephone interview at the end. The 1994 CMHS was a national probability sample of 3,789 adults' 18 years of age and older. The NMES samples wereweighed using data from the March 1987 Current Population Survey. The original CMHS sample was weighted to reflect their proportionate representation of the U.S. population as reflected in the Bureau of the Census March 1994 Current Population Survey. The CMHS weights were adjusted for the purposes of this study to match the P.L. 94-171 adjusted and unadjusted census counts.

Several variables were used in the analyses for this report: race and ethnicity, health insurance status, age, employment status, gender, region of the U.S., family income and perceived health status. Definitions of these variables are described below.

Race and Ethnicity

Classification by ethnic/racial background in the CMHS and NMES was based on information reported for each household member. Respondents were asked if their racial background was best described as African American (in the CMHS survey only) Black, Asian or Pacific Islander, Native American or Alaskan Native, white or another race. All respondents were also asked whether their main national origin or ancestry was among the following Hispanic-American subpopulations, regardless of racial background: Puerto Rican; Cuban; Mexican; Dominican, Costa Rican, or other Hispanic-American. In the CMHS the respondents who stated they were African American were also asked if they were of Caribbean heritage. In addition, in the CMHS, the respondents who indicated they were Asian or Pacific Islanders were also asked if they were either Chinese, Vietnamese, Korean or of some other Asian heritage. The categories of white and African-American were formed by taking only those whites, blacks, and African Americans who were not Hispanic (Latino) and placing them into their respective groups. The terms "Hispanics," "Latinos" and " Latino Americans" are used interchangeably in this paper to describe the experiences of those identified as Hispanics in the survey. The terms "African American" and "blacks" are used interchangeably in this paper to describe the experiences of those identified in the survey as non Hispanic Blacks or non-Hispanic African Americans. Due to restrictions in sample size, the analysis does not focus on Asian Americans, Native Americans or African Americans of Caribbean heritage or Hispanic subpopulations.

Insurance

Insurance data presented in this paper was based on self reported data from the survey respondents from the CMHS and NMES surveys. Questions were asked to determine whether a person was covered on the interview date in CMHS (and in the first quarter of 1987 in NMES) by health insurance through work or union; Health insurance through someone else's work or union; Health insurance purchased directly by the respondent or his/her family, some other group insurance, Medicare, or Medicaid. The category "Private Insurance Only" represented persons who had either health insurance through work or union, health insurance purchased directly by the respondent or his/her family or some other group insurance but did not have Medicare, Medicaid or some other public insurance. The category "Any Public Insurance" represented persons who had either Medicaid or Medicare on the date of the interview, regardless of whether they have some form of private insurance. The category "uninsured" represented the persons who did not fall into any of the above insurance categories.

Perceived health status

Perceived health status was defined by responses to the question how would you describe your own health- excellent, good, fair or poor.

Employment status

In both NMES and CHMS persons were considered employed if they had a job for pay, owned a business, or worked without pay in a family business.

Marital status

For both NMES and CHMS, the responses for the marital status of the survey respondent were recoded into “ever married” which includes persons who were married, living as a couple, divorced, separated, or widowed and “never married” which includes persons who were single.

Family income

Family income_was based on the total household income for the year (for the CHHS the year was 1993, for NMES the year was 1987).

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