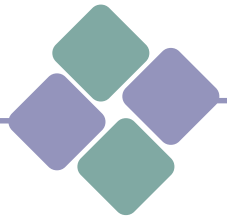

THE CENTER FOR STATE HEALTH POLICY

Adjusting for Under-Reporting of Hispanic Ethnicity in New Jersey Mortality Statistics

Dorothy Gaboda, Ph.D.
Felicity Tsikiwa
Lynn Warner, Ph.D.
Peter Guarnaccia, Ph.D.

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Adjusting for Under-Reporting of Hispanic Ethnicity in New Jersey Mortality Statistics

Executive Summary

Introduction

In January through June of 2000, the Center for State Health Policy at Rutgers University conducted a review and assessment of the collection and reporting of Hispanic ethnicity data recorded on death certificates of New Jersey residents. People of Hispanic origin are a large and growing part of the population, making accurate information about their health important for public policy and planning. Death rates from the Vital Statistics system are key elements used by state and federal governments to obtain indicators of health, set targets, recommend initiatives, and identify disparities in health outcomes.

Methods

This project combined a review of published literature, manuals and guidebooks with interviews of knowledgeable informants in New Jersey and other states, plus discussions with staff at the National Center for Health Statistics. Telephone interviews were conducted with informants in departments of vital statistics, centers for health statistics, and cancer registries in eleven states: California, Colorado, Florida, Illinois, Massachusetts, New Hampshire, Oklahoma, Texas, Virginia, Vermont, and New York. We also contacted representatives of the New Jersey funeral home industry to ask about practices for obtaining race and ethnicity information on death certificates.

The Quality Of Information On Race And Ethnicity In Mortality Statistics

Recent National Vital Statistics Reports include cautions that mortality of the Hispanic population is understated somewhat because of net underreporting of Hispanic origin on the death certificate. The amount of this underreporting is offset by undercounting of people of Hispanic origin in the 1990 census and population estimates which form the denominators of mortality rates. Consistent evidence since 1990 shows that the amount of underreporting in death certificates varies among Hispanic subgroups, with Mexicans having the highest rates, followed by Cubans, Puerto Ricans, and other Hispanics. It is likely that underreporting varies among states as well. Hispanics are affected by misclassification of both ethnicity and race. A number of studies have demonstrated that undercounting of Hispanics also affects reporting of infant mortality by ethnicity.

Changes were implemented in the 2000 Census to improve the accuracy of population counts of people of Hispanic origin, but estimates of any undercount will not be available for some time.

Consistent evidence shows that Asians and American Indians are also undercounted in vital statistics and population data. As Asians become a larger part of the population, it is likely that similar concerns will arise with improving identification of these individuals in mortality data.

The Process For Identifying And Recording Race And Ethnicity From The Death Certificate

The National Center for Health Statistics issues recommended standards to guide states in uniform collection of information about deaths. Information about the race and ethnicity of decedents

is collected by the funeral director from an informant, generally the next of kin, or from the best source of information available. All states we contacted use one of two approved formats for obtaining information about Hispanic origin. Guidelines specify that identification of ethnicity is intended to reflect what the person considered him/herself to be, and self-identification is considered the 'gold standard' for determination of Hispanic ethnicity.

Telephone interviews with funeral directors in New Jersey revealed no standard procedure for obtaining race and ethnicity information about decedents.

Practices In Other States

All the states we contacted collect information on race and Hispanic ethnicity on their death certificates, although the formats and degree of detail vary. Not all states gather information on specific Hispanic ancestries, while others collect general ancestry information which includes groups other than Hispanics.

Informants in several states expressed concern about the quality of race and Hispanic ethnicity data recorded on their death certificates. Typical concerns were that funeral directors do not ask consistently about Hispanic ethnicity, particularly if a decedent is black, and that race information is left blank for Hispanic decedents. There is a perception that the quality of death certificate information is better in areas with a long-standing Hispanic population and that quality is poorer in localities with a diversity of recent Hispanic immigrants.

Very few states have systematically studied underreporting of Hispanic ethnicity in their vital statistics. No state reported making any adjustment to death certificate information before producing mortality rates, although California, Colorado, and Texas develop their own population estimates as denominators. The Illinois State Cancer Registry uses an algorithm based on the 1990 U.S. Census Spanish surname list to adjust cancer incidence and mortality data, but this methodology is not currently used for other mortality statistics in Illinois.

States that produce mortality rates for the Hispanic population generally compare these to the categories of white non-Hispanic and black non-Hispanic; racial breakdowns are not reported within the Hispanic population.

Use Of Spanish Surname Lists

Spanish surname lists have been widely used by health researchers to increase the number of individuals identified as Hispanic. Evaluation studies have shown that using other information from the death certificate, such as birthplace or maiden name, is necessary to avoid identifying non-Hispanic individuals as Hispanic on the basis of surname only.

Use of surname lists has been shown to increase identification of individuals as Hispanic from death certificates; however, some limitations should be noted:

- Identification by surname may not accord with self-identification, particu larly for individuals who have mixed ancestry.
- Individuals cannot be identified as members of specific Hispanic subgroups.
- This method will not adjust for underreporting of Hispanic persons of Haitian or Dominican ancestry, since these birthplaces are generally excluded from the methodology.

- Individuals may still be misclassified by race.

- Population estimates are not affected, so that there may be inflation of mortality rates.

RECOMMENDATIONS

The CSHP project team recommends that the New Jersey Department of Health and Senior Services does not adopt methodology to adjust for underreporting of Hispanic ethnicity on death certificates at this time. Use of the Spanish surname algorithm should be reevaluated in two or three years when information from the 2000 Census is available.

The CSHP project team recommends that New Jersey improve the education and training of funeral directors to obtain accurate information about race and ethnicity when completing the death certificate. This can be accomplished in several ways:

- Providing training material to be used in the Funeral Director Program at Mercer County Community College;

- Providing information to be mailed to funeral directors at the time of license renewal.

- Developing training materials to be included in continuing education courses offered by the Funeral Directors Association.

- Providing speakers at meetings of the Funeral Directors Association to highlight the importance of accurate race and ethnicity information.

Adjusting for Under-Reporting of Hispanic Ethnicity in New Jersey Mortality Statistics

Introduction

In January, 2000, The New Jersey Department of Health and Senior Services, Office of Policy and Research, Center for Health Statistics (OPR/CHS) contracted with the Center for State Health Policy (CSHP) to assess, review and recommend improvements for the collection and reporting of Hispanic ethnicity data recorded on death certificates of New Jersey residents. The project was designed to assess the magnitude of underreporting of Hispanic ethnicity in New Jersey and other jurisdictions and review how the National Center for Health Statistics, other states, and the professional literature are handling the reporting of Hispanic mortality data. A particular focus of the project was to review methodologies which are available to adjust existing New Jersey death data and comment on the appropriateness of those methodologies for OPR/CHS use.

In the first two sections of this report, we provide background on the issue of accurately reporting race and ethnicity and detail the methods used in producing this report. Then, we discuss our findings in several sections:

- Discussion of research literature regarding the quality of information on race and ethnicity in mortality statistics.
- A review of the process used to record race and ethnicity information from death certificates and fetal death reports, including the practices of funeral directors in New Jersey.
- Practices in other states for handling race and Hispanic ethnicity information for mortality and other vital statistics.
- Discussion of the use of Spanish surname lists and other data from the death certificate to increase identification of Hispanic decedents.
- Recommendations for reporting Hispanic ethnicity in New Jersey mortality statistics.

Background

In New Jersey, as in the rest of the U.S. population, Hispanics are a large and growing part of the population, making accurate information about people of Hispanic origin important for public health policy and planning. In 1998, New Jersey had the seventh largest population of Hispanics in the U.S., estimated at 1,004,000 people; the Hispanic population has been growing rapidly in recent years.

People of Hispanic ancestry in New Jersey comprise a diverse group. According to the March 1999 Current Population Survey (CPS), the most common Hispanic subgroup in New Jersey is Central/South American (44.1% of the population). These people come from many different countries with unique cultures and customs. Other subgroups represented are Puerto Ricans (31.8%), Cubans (11.7%), Other Hispanic (8.9%) and Mexican/Mexican American (3.5%). Most Hispanics in New Jersey are white; however, people of Hispanic origin also appear in the black and Asian/ Pacific Islander categories. This diversity poses challenges to the accurate counting of people of Hispanic ethnicity in vital statistics and census data.

Death rates from the Vital Statistics system are key elements used by state and federal governments to obtain indicators of health, set health targets, recommend initiatives to improve health, and identify disparities in health outcomes for various racial and ethnic groups. For example, in the report, *Cancer Among Hispanics in New Jersey, 1990-1996*, the New Jersey Office of Cancer Epidemiology notes that there are certain cancers for which incidence rates in Hispanics are higher than in the overall population and then uses these findings to suggest screening activities which can be targeted at significant improvements in cancer survival among Hispanics.

National Vital Statistics Reports include data on mortality for persons of Hispanic ethnicity, and have begun to report differences in mortality for Hispanic subgroups. The 1997 report noted differences between the leading causes of death between the Hispanic and non-Hispanic population. Some of these differences appear to be influenced by the younger age of the Hispanic population , since a larger proportion of Hispanic deaths are due to causes which are more prevalent at younger ages. Particular health behaviors, such as diet, have been hypothesized to contribute to differences in mortality between Hispanics and non-Hispanics.[1,10,20,27] Investigation of these questions requires reliable state data on mortality for Hispanics.

There is no standard definition of Hispanic ethnicity or origin. While Hispanics are commonly considered a single group for consistency of classification, Hispanics include people with significant differences in culture, ethnicity, nationality, customs, religion, socioeconomic status, and origin. Self-identification is considered the 'gold standard' for determining Hispanic ethnicity. People of Hispanic ancestry differ in their self-identification as Hispanic or non-Hispanic; self-identification may differ among generations of a family or people who have mixed Hispanic/non-Hispanic ancestry.

Researchers studying people of Hispanic origin have struggled with the effect of differences in acculturation of immigrants, who come to the U.S. at different times in history and for different reasons. Some cultural distinctions are maintained long after immigration to the U.S. Recent immigrants may share little in common with third generation Americans of Hispanic ancestry. In addition, different Hispanic subgroups have settled in different areas of the country; studies done in particular locations may draw conclusions which are applicable only to particular subgroups rather than to Hispanics as a whole. The population covers the racial spectrum: Hispanics can be white, African American, Asian or Pacific Islander, or Native American. The term "Hispanic" itself has caused confusion among different groups, who attach different cultural and political significance to the term. Some may reject the label Hispanic altogether, preferring another designation such as "Latino."[36]

There is also no consistent methodology for collecting Hispanic ethnicity information for federal or state statistics. For Census enumeration, vital statistics, migration, and in survey data which are used to update Census Bureau population estimates, individuals may be designated as Hispanic through either self-identification or reporting by an informant for the family or household. For incidence of disease, ethnicity may be obtained through self-identification or the report of health care providers. For deaths, information on ethnicity is taken from the death certificate. This information is recorded by the funeral director, who obtains the information by asking a family member or other knowledgeable informant or by observation in the absence of an informant. Information from death certificates is then coded into electronic files to be used in the computation of mortality rates.

The quality of mortality statistics is affected by errors in the information collected from death certificates, which form the numerator of the rates and by undercounting in population data, which form the denominator of the rates. This report discusses potential bias from both sources.

Methods

To complete this project, we combined a review of published literature, manuals and guidelines with interviews of knowledgeable informants. We reviewed literature from scholarly journals and U.S. Government studies critiquing the quality and completeness of race and Hispanic-origin reporting on death certificates and on census and survey data. Several studies have compared data about Hispanic ethnicity gathered with different methods and have reviewed techniques used to adjust for undercounting of people of Hispanic origin.

We reviewed handbooks, manuals, and other printed material from the National Center for Health Statistics (NCHS) relating to the collection of information from death certificates and coding into electronic data bases. We contacted staff at NCHS for clarification on guidelines and recommendations where necessary.

Within New Jersey, we met with representatives of the Center for Health Statistics, the Bureau of Vital Statistics, and the Cancer Registry. We conducted telephone interviews with individuals at the AIDS/HIV Registry, communicable disease, the Funeral Director Program at Mercer County Community College, the New Jersey State Board of Mortuary Science, and the Center for Hispanic Policy, Research & Development. We also spoke to faculty at Rutgers with expertise in Hispanic ethnicity and immigration and interviewed a few funeral directors by telephone to ask about their practices.

Telephone interviews were conducted with informants in other states to learn what concerns they had with the quality of the racial and ethnic information obtained on their death certificates and what adjustments were made to their mortality statistics to correct for bias. These informants included statisticians, demographers, and state registrars in departments of vital statistics, centers for health statistics, and cancer registries. The project team interviewed informants in eleven states: California, Colorado, Florida, Illinois, Massachusetts, New Hampshire, Oklahoma, Texas, Virginia, Vermont, and New York. We also spoke to vital statistics staff in New York City and Canada. We obtained a number of reports from other states to provide more detailed information on practices and publications.

The Quality Of Information On Race And Ethnicity In Mortality Statistics

National Vital Statistics Reports include mortality data for persons of Hispanic ethnicity, and have begun to report differences in mortality for Hispanic subgroups. However, in recent years technical notes to these reports have indicated problems with the mortality rates for Hispanics. The report on 1997 deaths included a caution that national mortality of the Hispanic population is understated somewhat because of net underreporting of Hispanic origin on the death certificate.

A recent NCHS data evaluation and methods report[21] noted that the impact of this underreporting is offset by the undercoverage of the Hispanic population in the 1990 census and annual population estimates which are based on the census. The problem of undercounting Hispanic persons in population counts tends to bias mortality rates upward, while the undercount of Hispanics on death certificates tends to lower mortality rates. An adjustment which multiplied mortality rates by a single ratio to correct for the combination of bias in reporting on the death certificate as well as undercoverage on the 1990 census yielded an adjusted mortality rate for Hispanics which was only 1.6 percent above the reported rate. This suggests that biases in the numerator and denominator do indeed tend to cancel each other out on a national basis for Hispanic death rates overall. However, this adjustment was applied on a national basis, and does not adjust for differences in the amount of underreporting for Hispanic subgroups in different areas of the

country.

Evaluation studies since the early 1990s have demonstrated inaccuracy in mortality statistics for Hispanics[16, 22, 28]. These inaccuracies can result from undercounting and misclassification on both death certificates and population data. These sources of error are discussed separately below. For mortality reporting, the NCHS and the states often treat Hispanic ethnicity as if it were a racial category, even though Hispanics may be of any race and the U.S. Office of Management and Budget (OMB) has directed federal agencies to collect race and ethnicity information separately. Hispanic deaths may be compared to categories such as white non-Hispanic and black non-Hispanic deaths, or to white non-Hispanic and all blacks, leading to inconsistencies in classification and reporting.

This apparent lack of clarity reflects different perceptions within the Hispanic population of what being 'of Hispanic origin' means. In the 1990 census, ten million people reported in the 'other' race category. Subsequent analysis indicated that about 98 percent of these were Hispanics who considered Hispanic a race and did not identify with any of the specific racial categories. In the 2000 census, the question about Hispanic ethnicity is asked before the race item, but it is not clear yet what result this will have on the numbers of people who are identified as Hispanic.

In the discussion below, we address misclassification of both race and Hispanic ethnicity, since errors in cross-classification of race and ethnicity may affect mortality rates for all groups.

Race and Hispanic Ethnicity on the Death Certificate

Information on the death certificate is subject to bias and errors in reporting; the race and ethnicity of decedents may be misreported or the information may be incomplete. The quality of racial and ethnic information on the death certificate has been studied in several ways, usually by comparing the race and ethnicity reported on death certificates with information from another source, such as censuses, surveys, or other vital records.

Studies comparing racial information on death certificates to self-identification on the Census and the Current Population Survey (CPS) have demonstrated that consistency of race reporting between death certificates and survey data is generally good for whites and blacks, on the basis of comparing both individual records and aggregate counts. Two studies of the quality of race information on the death certificate[27, 28] demonstrated that the level of agreement between information on the death certificate and information from the Current Population Survey was more than 98% for black and white decedents, but that the levels of agreement were lower for American Indians, Asian/Pacific Islanders, and Hispanics. Inconsistencies in the reporting of race and ethnicity have been found for all three groups.

The reliability of Hispanic origin reported on death certificates has also been assessed in similar ways. Death certificates for the years 1979-1985 were matched to CPS files for twenty-one states which had a Hispanic-origin item on their birth certificates. The results showed underreporting of Hispanic ethnicity on death certificates; the ratio of the number of deaths reported as Hispanic on the CPS divided by the number of deaths reported on death certificates was 1.07, indicating Hispanic ethnicity was underreported on death certificates by about 7%. Ratios varied between Hispanic subgroups, with Mexicans having the highest ratio (1.11), followed by Cubans (1.07), Puerto Ricans (1.04) and Other Hispanics (.89). Sample sizes were quite small for Hispanic subgroups, so comparison could not be made among states.[40]

Studies have differed somewhat in determining whether underreporting of Hispanic ethnicity varies substantially by sex or race of the decedent. There is some indication that underreporting may vary by age.

It is clear, however, that studies of race and ethnicity information on the death certificate have consistently found underreporting of Hispanic ethnicity nationally and in the particular states or localities studied. The rates of underreporting vary by Hispanic subgroup; it is likely that underreporting differs by state, perhaps related to the composition of the Hispanic population, but these differences have not yet been quantified.

Several studies of mortality rates among Hispanics have used other information from the death certificate, such as birthplace, to determine Hispanic status and found that this method of determining Hispanic ethnicity provided better agreement with self-identification in surveys than merely using the Hispanic origin item. A study using birthplace as well as Hispanic origin from the death certificate found that this method of identification agreed 96.4% with Census classification.[3]

The consistency of the reporting of place of birth between death certificates and survey information appears to be good; one study found that agreement was above 99 percent for those born in the United States and 97.3 percent for those born outside of the U.S. It seems likely that information about place of birth on the death certificate is always obtained from an informant by the funeral director and therefore is less likely to be misreported than race or ethnicity, where the funeral directors may substitute their own judgment.

Another technique used to increase the identification of people of Hispanic origin in health services research is Spanish-surname lists. A California study found different mortality rates when people of Hispanic origin were identified by using death certificate information only, the 1980 U.S. census Spanish-surname list, and an expanded version of the surname list including hyphenated surnames. The mortality rates produced by the three methods of identifying Hispanics changed the relative risk of death between Hispanics and non-Hispanic whites and sometimes produced inconsistent results. A different study utilizing the Spanish surname method demonstrated some misclassification of ethnicity. The Spanish surname method is discussed in more detail later in this report.

Data Quality of Population Counts and Estimates

Population data used for mortality rates are most frequently drawn from Census data or from population estimates developed by updating census counts. Undercounting of minority groups can cause errors in mortality rates by affecting population counts and estimates. The Census Bureau used statistical and demographic methods to estimate undercounting in the 1990 census at 5 percent among Hispanics and 2.4 percent for Asian and Pacific Islanders nationally.

Death rates for the total Hispanic population and race for the non-Hispanic population utilize demographically-derived population estimates based on the 1990 census. The methods use counts of births, deaths, and migration from various sources. Population estimates for subgroups within the Hispanic population (Mexicans, Puerto Ricans, Cubans and Other Hispanics) are based on adjusted Current Population Survey data prepared by the Housing and Household Economic Statistics Division; since the CPS samples the population of each state, these estimates are subject to sampling variation as well as random reporting error.

To address concerns that blacks and Hispanics were undercounted in the 1990 census and test methods of improving reporting in the future, the OMB established the Interagency Committee for the Review of Racial and Ethnic Standards, which then sponsored a one-time supplement to the monthly Current Population Survey (CPS). Census and survey data generally assume that respondents accurately report their race and ethnicity. However, the results of the CPS supplement demonstrated the difficulty of finding a definition and methodology which would accurately and consistently capture self-identified Hispanic ethnicity.

The CPS supplement showed that 58 percent of Americans tracing their ancestry to Mexico or other Latin American nations prefer to be identified as Hispanic, while twelve percent prefer Latino; the remainder prefer something else. Different versions of the supplement gave respondents the option of responding to 'Hispanic' as a racial category or as a separate item apart from race. Differences emerged in the self-identification of Hispanic subgroups. When Hispanic was not given as a racial-category option, clear majorities of Mexicans, Puerto Ricans, and Cubans identified themselves as Hispanic and white, although many Mexicans and Puerto Ricans opted for 'other' in the racial category. When Hispanic was presented as a racial-category option, the overwhelming majority of Mexicans and Puerto Ricans identified themselves as racially Hispanic. A proportion of Cubans also shifted to the Hispanic racial category, although 58 percent continued to identify themselves as racially white.[25]

As a result of the CPS supplement, changes were made in the 2000 census to gather more accurate information about Hispanic ethnicity and race by asking about Hispanic origin before asking people to categorize their own race and that of their household members, and to reach the Hispanic population so that they are included in the enumeration. The number of ancestries that will be tracked by the census data has also been expanded, providing the possibility of identifying additional people of Hispanic origin through ancestry. However, it will be some time before estimates of any undercount of Hispanics in the 2000 census will be available.

Data about the Hispanic population which has been collected in other surveys has suffered widespread inconsistency in the manner in which Hispanics are classified from area to area and within regions[19]. Several studies have demonstrated that Hispanics are not counted accurately and are under-represented in health statistics nationally. Cancer researchers have been particularly alert to this difficulty and have expressed concern about the accuracy of race and ethnicity information from the Census and other NCHS-sponsored health surveys.

Research studies estimating mortality rates have used a variety of Census Bureau population estimates and demographic estimates prepared by various states from their own data. The effect on estimated mortality rates of these differences in denominator are difficult to determine, since studies cover different time periods and locations. However, the most important caution in interpreting research on Hispanic mortality rates is that studies report either national figures or results for a state or portion of a state where the Hispanic population may be very different from that in New Jersey.

Infant Mortality

Infant mortality rates for the Hispanic population are based on the numbers of infant live births reported to be Hispanic on the basis of Hispanic origin of the mother and the number of infant deaths reported to be of Hispanic origin based on death certificates. Deaths of unknown origin are omitted from the calculations; however, this was only 1.6 percent of total deaths for the U.S. in 1996.

A number of studies have assessed misreporting of race and ethnicity in infant mortality statistics by comparing infant death reports with birth certificate information for the infant. Since infants are not assigned a race and ethnicity at birth, information on the race and Hispanic origin of the parents (usually the mother) is generally used to determine the race and ethnicity of the infant. Information for deceased infants is obtained by funeral directors from an informant in the same way that information is obtained for adults.

Some bias is inherent in infant mortality statistics merely because of the difference in the information gathered for the numerator and denominator of the rates. Determining infant mortality rates from linked infant birth and death files is considered a superior methodology because the

race and Hispanic ethnicity of the mother can be used for consistency in both the numerator and denominator. Comparison of linked birth and death files has shown that agreement on race for white and black infants is quite good, but death certificate information underestimates American Indians, Asians, and Hispanics. Researchers using linked files identified about 5% more infants as Hispanic. Less underreporting has been observed for Mexican and Cuban infants, but rates for Puerto Rican infants were underreported by about 12% in some studies.

The appropriateness of determining race and ethnicity of the infant solely from the mother's self-report is problematic for Hispanic children in families with mixed races and ancestries, where there is the potential for family members to identify themselves differently. One researcher compared infant death records from the NCHS and Census classifications of race and ethnicity for deceased infants who appeared in the 1990 census. Using race and ethnicity of the mother to impute the race and ethnicity of the infant appears to correctly classify most infants except for American Indians. However, this does not imply that cross-classification of race/Hispanic origin is consistent.[24] This study also noted that inconsistencies are more likely for children whose parents are of mixed race or ethnicity.

The Process For Identifying And Recording Race And Ethnicity From The Death Certificate

Responsibility and authority for producing national vital statistics is a function of the U.S. Public Health Service, assigned to the National Center for Health Statistics (NCHS). The NCHS collects data annually from vital records of the states and provides assistance to states in developing comparable data. The NCHS issues recommended standards and standard death certificates to achieve uniformity in information collection about deaths. The standard death certificate has been revised ten times since 1900, most recently in 1989. Recommended standards for gathering vital statistics are contained in the Model State Vital Statistics Act and Regulations.

The Model State Vital Statistics Regulations guide state registrars of vital statistics and state legislators in revising their own vital statistics regulations. The Regulations were last revised in 1992 to allow states to incorporate technological advances in records and information management.

The NCHS sets uniform guidelines for data which will be collected by the state for decedents and for item coding. For deaths, the basic items required are sex, date of death, age, date of birth, birthplace, type of place of death, geographic place of death, marital status, occupation and industry, residence, Hispanic origin, race, education, cause of death, and whether the decedent was injured at work. Personal data about the decedent should be obtained by the funeral director from the next of kin or the best qualified person or source available. The NCHS recommends that state registrars have the responsibility of conducting "training programs to promote uniformity of policy and procedures throughout the State in matters pertaining to the system of vital statistics."

Identification of Hispanic Origin on the Death Certificate

The category "Hispanic" was introduced in 1977 by the OMB with Statistical Policy Directive No. 15. The U.S. Bureau of the Census first identified persons of "Spanish/Hispanic" origin in 1980, and mortality statistics for the Hispanic population were published for the first time in 1984.

To conform to the OMB directive, the 1989 revision of the death certificate (see Appendix) added an item identifying Hispanic origin. As of 1997, all states and the District of Columbia provide this information about decedents.

The 1989 Revision of the U.S. Standard Certificates and Reports issued by the NCHS gave

each state the option of including either an ancestry question or a specific question about Hispanic origin on its death certificate. The first option, a specific question about Hispanic origin, is considered the preferred form, since the emphasis of the OMB directive was on collecting Hispanic data. The experience of the U.S. Bureau of the Census has been that a specific Hispanic question produces better data on Hispanics than does a general ancestry question. The recommended formats are:

- WAS DECEDENT OF HISPANIC ORIGIN?
  (Specify No or Yes—If yes, specify Cuban, Mexican, Puerto Rican, etc.)
  ❑ No ❑ Yes
  Specify:

- ANCESTRY—Mexican, Puerto Rican, Cuban, African, English, Irish, German, Hmong, etc.
  Specify:

The National Center for Health Statistics reports that states generally have used items on death certificates similar to one of the two recommended formats. The New Jersey Certificate of Death (see Appendix) uses an item similar to the first option.

The Model State Regulations direct the funeral director to complete personal data about the decedent on the death certificate. The guidelines specify that the funeral director should obtain data about the decedent from the next of kin or best qualified person or source available. In the absence of an informant, the funeral director may assign race and ethnicity by observation.

The Public Health Service has published instructions for completing death certificate information in the *Funeral Directors' Handbook on Death Registration and Fetal Death Reporting*, issued in 1987. According to the New Jersey State Registrar's Office, there are no specific instructions on the gathering of ethnicity data other than those in this handbook.

The Handbook provides instructions on how to complete all items on the death certificate and report of fetal death. As part of the 49 pages of information, the handbook includes information on how to complete the item on Hispanic origin or ancestry. It instructs funeral directors to complete the Hispanic origin item on the death certificate in all instances and not to leave it blank. The entry is to reflect the response of the informant, and multiple Hispanic origins are to be entered as reported. Hispanic is defined as "people whose origins are from Spain, Mexico, or the Spanish-speaking countries of Central or South America." Origin can be defined as ancestry, nationality, lineage, or the country in which a person or his/her ancestors were born and is *intended to reflect what the person considered him/herself to be* (emphasis added). For infant deaths, children's Hispanic origin is to be determined by the parent(s), based on their own origin. The handbook includes brief statements about the reason for including each item of information on the death certificate; for the Hispanic origin item, it states that reliable data on the Hispanic population is important to identify public health problems of Hispanics and that information from the death certificate will permit the production of mortality data for the Hispanic community.

Death certificates are filed with local registrars and forwarded to the State Registrar's office, where they are checked and edited and then entered into the computer. If changes are requested in the death certificate information at a later time by next of kin, a prescribed amendment process must be followed.

Electronic Coding and Editing of Race and Ethnicity Information

The NCHS provides classification and coding instructions for death records and applies edits to the death information after it is received from the states. Although Hispanic origin and race are separate items on the death certificate, information from one item can be used to code the other in certain instances. Pages from the manuals pertaining to race and Hispanic origin are included in the Appendix.[9]

For race, the code structure is:

White	
Includes Mexican, Puerto Rican, and other Caucasian	1
Black	2
Indian	
North American, Central America, South American, Eskimo, Aleut	3
Asian or Pacific Islander	
Chinese	4
Japanese	5
Hawaiian (includes part-Hawaiian)	6
Filipino	7
Other	8
Asian Indian	A
Korean	B
Samoan	C
Vietnamese	D
Guamian	E
Multi-racial	F
Other entries	0
Not Reported	9

If more than one race is reported, the first listed is to be coded, except for Hawaiian, which is always coded if listed alone or with another race. Code F is to be used for such entries as "multiracial," "biracial,", or "mixed". Records coded as "not stated" (code 9), "other entries" (code 0), or "multiracial" (code F) are later recoded by the NCHS during editing to the race of the preceding record and flagged with an imputation flag.

If nationality information rather than race is written into the race item, coding instructions for race are provided on a list of 'Other entries' in Appendix B of the classification and coding instructions. Nationalities from Central and South American and Caribbean countries are treated in a number of different ways; Bolivian, Chicano, Colombian, Costa Rican, Cuban, Puerto Rican, Mexican and Hispanic are coded as '1' (white); Dominican is coded as '2' (black), and Guatemalan and Honduran are coded as '0'.

Codes for Hispanic origin are:

Non-Hispanic	0
Mexican	1
Puerto Rican	2
Cuban	3
Central or South American (Spanish speaking countries only)	4
Other and unknown Hispanic	5
Not Classifiable	9

If the item on the death certificate asking about Hispanic origin is marked 'No', but a Hispanic ethnicity is recorded, the case is coded as Hispanic. If 'Yes' is marked, but no subgroup is reported, information about Hispanic origin written into the race item or birthplace item may be used to code the case to the appropriate subgroup. As with race, if more than one Hispanic origin is listed, only the first is coded. Because the quality of information about race and ethnicity on the death certificate is so dependent upon information gathering by funeral directors investigated the preparation and practices of funeral directors in New Jersey.

Practices of Funeral Directors in New Jersey

Only one school in New Jersey has a funeral director curriculum, the Funeral Director Program at Mercer County Community College. Filling out the death certificate is taught during the field experience seminar.

Funeral directors are licensed by the New Jersey State Board of Mortuary Science. Every two years, funeral directors are required to renew their licenses. As part of this, they are required to show they have taken ten credits of continuing education. Continuing education workshops are offered by the Funeral Director's Association and are designed to cover a variety of topics.

In telephone interviews with six funeral homes in New Brunswick, Montclair, Newark, and Vineland, we asked funeral directors about collecting information on race and ethnicity. We received a variety of answers. Generally, funeral directors said that they ask the family or the person who makes the arrangements about the decedent's race and ethnicity. It appears that some funeral homes serve a close-knit community and know many of the families whose members they bury. In many instances, however, the funeral director has had no previous contact with the family. When the family member making arrangements does not speak English, the funeral director finds someone in the family or an employee who can translate.

There does not appear to be standard procedure or series of questions for obtaining race and ethnicity information, and it is not clear whether funeral directors provide any guidance to informants. A number of funeral directors expressed some discomfort with the race and ethnicity items. For example, one said that he sometimes wondered if the information was accurate, but "I just write down what the family says and take their word for it, no matter what." Another said, "You can *tell* when the family sits down" what race and ethnicity they are.

While we did not undertake a formal survey of funeral directors, the information we obtained in interviews suggests that at least some funeral directors obtain ethnicity information in informal ways. If funeral directors believe that they know race and ethnicity of decedents by observation (or would be expected by the family to know because of familiarity with the family or the community), they may not ask questions about race and Hispanic origin and proceed on the basis of their assumptions about what is accurate.

It is not clear what effect the manner in which a funeral director obtains information about race and Hispanic ethnicity has on informants. However, funeral directors apparently develop their own procedures for obtaining this information.

We could not find any research which directly addressed the accuracy of funeral directors' identification of race and ethnicity when no informant is present. However, indirect evidence is provided by a number of studies which have documented discrepancies between interviewer-observed race and self-identified race. The problem exists for all racial or ethnic groups, but is especially acute for American Indians, Hispanics, and Asian Americans.[12, 36]

The Model States Vital Statistics Regulations list conducting training programs to promote uniform procedures throughout the state among the duties of the state registrar. Clarifying the preferred manner of obtaining race and ethnicity information and providing ongoing training and coaching to funeral directors on a consistent procedure for obtaining race and ethnicity identification of decedents could be expected to improve the quality of the information which is recorded on the death certificate.

Practices In Other States

To gather information on how mortality statistics are reported in other states, telephone interviews were conducted with individuals in offices responsible for health statistics, vital statistics, cancer registries, and other offices within health departments in the following states: California, Colorado, Florida, Illinois, Massachusetts, New Hampshire, Oklahoma, Texas, Virginia, Vermont, and New York. We also spoke to a biostatistician in the New York City Department of Health to determine whether New York City prepares mortality reports differently from the rest of the state, since New York City has a large and concentrated Hispanic population. We selected these states to include those with large, well-established Hispanic populations, those with rapidly growing Hispanic populations, and those with little racial and ethnic diversity.

We asked how information on race and Hispanic ethnicity is collected on state death certificates, what data are used as denominators for mortality rates, and whether any adjustments are made to compensate for perceived inaccuracies in reporting Hispanic origin. While our questions were focused on mortality statistics, many informants volunteered information on other data systems within their state.

Race and Hispanic Ethnicity on Death Certificates

In accordance with NCHS guidelines, all states we contacted collect race and Hispanic origin information with separate items on their death certificates. Oklahoma was the last state to begin collecting information on Hispanic ethnicity in 1997.

States differ somewhat in the way information on race is captured on the death certificate. Most have an item where race can be written in. Many use the categories established by the OMB for federal agencies to code entries: white, black, American Indian, and Asian/Pacific Islander, although a few states (including New Jersey) collect detailed information about Asian or Pacific Islander subgroups.

Not all states collect information for Hispanic subgroups on the death certificate. Several have only a yes/no question which asks if the decedent was of Hispanic origin. New Hampshire uses a general ancestry question rather than a Hispanic origin item, and Massachusetts is planning to move to a general ancestry question to conform more closely to the 2000 census format, which permits more detailed recording of information about ancestry.

Most of the states which collect information on Hispanic subgroups report using the same categories which are on the New Jersey death certificate: Mexican, Puerto Rican, Cuban, Central or South American, and Other(Specify), although a few states add other categories, such as Chicano, which they feel apply to their Hispanic population. Florida's death certificate records if a person is of Hispanic or Haitian origin, and Haitian is included as an Hispanic subcategory.

Informants in several states expressed concern about the quality of race and Hispanic ethnicity data recorded on death certificates. The most frequently expressed concern was the perception that Hispanics may be automatically reported as 'white.' In most states, people of unknown His-

panic origin are automatically coded as 'white', but there may be other misclassifications because funeral directors do not ask questions thoroughly or make assumptions about race. Some informants said that they suspected that funeral directors were classifying some Hispanic decedents as black and not asking about Hispanic ethnicity.

It was suggested by informants in several states that the accuracy of death certificate information about Hispanic ethnicity is better in areas with a larger Hispanic population, particularly if that population has lived in the area for a long period of time and is more homogeneous in ancestry. For example, California and Texas have long-standing Hispanic populations comprised largely of Mexican Americans and have fewer concerns about the accuracy of Hispanic identification on their death certificates, while Illinois has more recent Hispanic immigrants and has greater concerns about correct identification of decedents.

Several states reported that they intend to revise their death certificates to put a question about Hispanic ethnicity before the item asking about race. Oklahoma's death certificate currently has the Hispanic origin item first, but a statistician there reported that they are concerned because on many forms where Hispanic origin is reported affirmatively, race is left blank, so they are not sure that this approach is working as they intended.

Another major concern expressed was that information is not collected consistently within all the state data systems for vital statistics and disease tracking. In other words, information from birth and death certificates, cancer registries, AIDS/HIV registries, and communicable disease registries is likely to be collected by asking different questions and coded using different categories. For example, in Massachusetts, about two thirds of the disease and vital records data systems identify individuals as Hispanic in some way, but these systems are inconsistent in whether race and Hispanic ethnicity are collected as separate items and in race categories used. In Florida, Hispanic is coded as a racial category for AIDS/HIV registration, but Hispanic ethnicity and race are coded separately for other reporting.

Most of the state representatives we spoke with reported that the quality of race and Hispanic ethnicity information in vital statistics has been discussed but has not been systematically studied. A few states have done some analysis of their data. For example, Colorado matched a set of birth and death certificates to determine if race and Hispanic origin was reported consistently for deaths. They found an unspecified amount of inconsistency in reporting of Hispanic origin; however, they are not contemplating any changes in their system at this time. Texas reported finding inconsistency in the reporting of Hispanic ethnicity in their data several years ago. For a few years in the late 1980s, Texas used the Spanish surname list to increase identification of Hispanic decedents, but this practice was stopped because they felt that too many non-Hispanics were being misclassified as Hispanic.

The Illinois State Cancer Registry is currently using an algorithm which combines the 1990 U.S. Spanish surname list with other information from the death certificate to increase the identification of decedents of Hispanic origin. A similar approach is used to increase the identification of individuals diagnosed with cancer. The Cancer Registry adopted this approach after careful study to determine that it was appropriate for their purposes. The algorithm is used by the Cancer Registry to make calculation of cancer mortality consistent with calculation of cancer incidence, but is not used for other mortality statistics. Illinois has considered using a similar algorithm with information about birth defects, but they are planning a careful evaluation of the method before using it for this purpose. This methodology is described more completely in the following section.

Other states reported that, while they are aware of potential biases in race and Hispanic ethnicity data, they have not solved the problem and are not making or planning any adjustments to correct for this. Illinois was the only state which was able to give an estimate of the amount of

underreporting of Hispanic ethnicity; the estimate of 15% came from the number of additional decedents who were identified as Hispanic by use of the Spanish surname algorithm.

Population Data Used by States

Most states reported using U.S. Census population estimates for the denominators of their mortality rates. However, a few states reported using their own data. Texas and California develop their own population estimates from state data; Colorado uses a local demographer to generate population estimates for vital statistics. Several informants acknowledged that denominator data for Hispanic ethnicity has limitations regardless of the source, but most felt that the population estimates from the Bureau of the Census were the best information available.

Reporting of Mortality Rates

Mortality statistics, as frequencies or rates, can be tabulated separately by race and Hispanic origin by most states, since these items are collected separately in the states we studied. However, most states do not crosstabulate race and Hispanic ethnicity information in published reports of the health status of their residents. Therefore, health information is often reported for categories of white non-Hispanic, black non-Hispanic, and all Hispanics. Categories for Hispanics of various race are often not reported because of small numbers.

Other racial categories reported in some states are American Indian (including Aleuts and Eskimos) and Asian or Pacific Islanders. States vary in how much detail they report within the Asian or Pacific Islander or the American Indian categories. Our informants suggested that in states with large and/or diverse populations of Asian/Pacific Islanders, or American Indians, health indicators may vary among these groups and more detail is helpful in planning and policy setting. However, since Census Bureau population estimates, by race, do not provide information on subgroups within the Asian/Pacific Islander and American Indian categories, additional work must be done to develop denominators for morality rates. Some states report an 'Other' category, which usually includes Asian/Pacific Islanders and American Indians, where these groups are not large enough to report separately.

States with small minority populations, such as Vermont and New Hampshire, generally do not report separate mortality data for Hispanics, since the numbers are very small.

Use Of Spanish Surname Lists

The U.S. Bureau of the Census produced Spanish surname lists for 1950, 1960, 1970, 1980, and 1990 to provide an inventory of surnames characteristic of the Hispanic population in the U.S. The 1990 Spanish surname list includes names from the 1990 census with a classification scheme developed by comparing these names with self-identified Hispanic ethnicity; names are classified from Heavily Hispanic to Rarely Hispanic. The classification scheme takes into account both the relationship of the surname to the Hispanic origin item on the Census and the frequency with which the surname appears in the sample. Surnames were placed into categories depending upon the proportion of householders with the surname who reported themselves as Hispanic on the 1990 Census form. The five categories are as follows:

Spanish Surname Classification	*Proportion of Householders who are Hispanic*
Heavily Hispanic	Over 75 percent
Generally Hispanic	50 percent < x < 75 percent

Moderately Hispanic	25 percent < x < 50 percent
Occasionally Hispanic	5 percent < x < 25 percent
Rarely Hispanic	Lower than 5 percent

Spanish surname lists have been used to identify Hispanic individuals by health researchers and governmental agencies. It is a common practice to use Spanish surname lists in cancer registries across the U.S. The lists have been criticized because hyphenated names are not included.

Algorithm Developed by the Illinois State Cancer Registry

The Illinois State Cancer Registry became concerned in the 1990's that the reporting of cancer incidence was underreporting Hispanic ethnicity. Illinois is one of eleven states where the Hispanic population is concentrated, and the Hispanic population has been growing rapidly in recent years. Therefore, the Illinois State Cancer Registry conducted two studies to evaluate methods of reporting Hispanic cancer incidence and mortality using the Hispanic origin item and other information from the death certificate combined with the U.S. Census Spanish surname list. The study of cancer death certificates from 1986 to 1996 included several steps to determine the utility of using indirect identifiers from the death certificate to improve the correct classification of individuals using the Spanish surname list.

- The names on the Spanish surname list were compared to the names of persons identified on Illinois death certificates as Hispanic to ensure that the relationship between surname and ethnicity was similar.

- The ability of non-U.S. birthplaces, including Mexico, Cuba, Puerto Rico, Spain, and several Central and South American counties to predict Hispanic ethnicity was evaluated and determined to increase precision.

- Using race, birthplace and surname status to exclude individuals not of Hispanic origin was found to decrease misclassification of non-Hispanics as Hispanic.

Based on the results of this study, the Illinois State Cancer Registry determined that Hispanic decedents would be identified as follows:

- All decedents identified on death certificates as Hispanic;

- Decedents with Heavily Hispanic surnames (last name for males and never married females and maiden name for ever married females), unless:

  - Birthplace is associated with high Spanish surname prevalence, but low probability of Hispanic ethnicity;

  - Race is American Indian, Filipino, or Hawaiian;

- Decedents born in a birthplace with high probability of Hispanic ethnicity, unless surname is classified as rarely Hispanic or does not appear on the 1990 Census Spanish surname list.

Women with marital status missing on the death certificate are not included in this method of identifying Hispanic ethnicity.

Birthplaces with a high prevalence of Spanish surnames but a low probability of Hispanic

Table 1: Birthplaces as Classified for Use with the Illinois State Cancer Registry Algorithm for Identifying Individuals with Hispanic Ethnicity

Birthplace Associated with High Probability of Hispanic Ethnicity	Birthplaces Associated with High Spanish Surname Prevalence and Low Probability of Hispanic Ethnicity
Mexico, Puerto Rico, Cuba, Central America (Guatemala, Belize, Honduras, El Salvador, Nicaragua, Costa Rica, Panama), South America (Colombia, Venezuela, Ecuador, Peru, Bolivia, Chile, Argentina, Paraguay, Uruguay), Spain, Andorra	Atlantic/Caribbean Area (except Cuba and Puerto Rico), Panama Canal Zone, Brazil, Guyana, Surinam, French Guyana, Europe (except Spain) including Portugal, Asia including the Philippines

ethnicity and birthplaces with a high probability of Hispanic ethnicity are listed in Table 1. These designations are consistent with those in the 1999 NCHS Demographic Classification and Coding Instructions.

Illinois State Cancer Registry officials believe that use of this algorithm enables them to increase correct identification of Hispanic decedents who are not accurately recorded by the Hispanic origin item on the death certificate. The algorithm was designed with safeguards to minimize misclassification of non-Hispanic individuals as Hispanic through limitation of surnames to those in the Heavily Hispanic category and the use of birthplace and maiden name for women who have been married.

Surname Use within New Jersey

The New Jersey State Cancer Registry used the Spanish surname algorithm developed in Illinois to identify Hispanic individuals for the period 1990-1996. As a result of using the algorithm, the NJ Cancer Registry was able to assign Hispanic ethnicity to an additional 29% of mortality cases. The Cancer Registry viewed the Illinois surname methodology as an improvement over previous algorithms for indirectly identifying Hispanics, a view which is supported by the studies in which the Illinois Cancer Registry evaluated the effect of using the surname algorithm on Illinois cancer statistics. For consistency, the New Jersey Registry applied the algorithm to both cancer incidence and cancer mortality.

The New Jersey HIV/AIDS Registry reports that they experimented with the methodology used by the Cancer Registry, and found an increase of about 10% in the cases identified as Hispanic. However, they decided not to use the methodology.

The HIV/AIDS Registry reports more concern about the confusion in classification between race and ethnicity, particularly the default classification of people of Hispanic origin as white.

Studies Evaluating the Use of Spanish Surname Lists

Health services researchers have used Spanish surname lists to increase the numbers of cases identified as Hispanic. A few studies have evaluated the ability of Spanish surname lists to correctly identify individuals of Hispanic origin. One study[30] found that a cancer registry substantially over-reported Hispanic ethnicity, but the number of cases over- and underreported was about the same. The results tend to support the use of other information from the death certificate to avoid identifying non-Hispanic individuals as Hispanic on the basis of surname only.

A California study compared an expanded surname list, produced by identifying individuals born in Puerto Rico, Mexico, Cuba, Spain, or South or Central America, with the Hispanic origin item from the death certificate and the standard U.S. Census Spanish surname list. The expanded surname list produced about the same number of individuals identified as Hispanic as did death certificate information, while the standard surname list produced fewer. The approach of using birthplace information to increase identification of Hispanic origin is similar to the algorithm used

Table 2: Comparison of the Hispanic Population in New Jersey and Illinois by Ancestry, 1998

	New Jersey		Illinois	
	Number	*%*	*Number*	*%*
Mexican American	5,852	0.6	268,982	21.7
Chicano	0	0	11,847	0.9
Mexicano	27,893	2.9	703,820	56.8
Puerto Rican	311,412	31.8	139,115	11.2
Cuban	114,616	11.7	23,626	1.9
Central/S. American	431,474	44.1	74,454	6.0
Other Spanish	86,791	8.9	17,391	1.4
TOTAL	**978,038**	**100.00**	**1,239,235**	**100.00**

Source: March 1999 Current Population Survey. Results subject to sampling error.

by the Illinois State Cancer Registry. However, in this study the expanded version of the list also incorporated hyphenated names and alternative spellings of Spanish surnames (e.g., Cisneros and Sisneros).

Other studies evaluating the Spanish surname approach have found women are more likely to be misclassified than men, but that using maiden name or father's surname for women who have ever been married substantially improves the correct identification. One study noted that correct identification was lower at higher socioeconomic levels; however, this study was conducted in an area of Texas where the population is predominantly Mexican American, so it not clear whether similar results would be seen in New Jersey.[8,30,37]

The research evaluating the use of Spanish surname lists was done in Texas, California, and Illinois, all states in which a substantial majority of the Hispanic population is of Mexican origin. Information from the March 1999 Current Population Survey indicates that the most common origins for the New Jersey Hispanic population are Puerto Rican, Cuban, and Central or South American. Table 2 compares the ancestries of the Hispanic populations in Illinois and New Jersey. The differences raise questions about how applicable the results of the Illinois findings are to New Jersey.

Limitations of Spanish Surname Methodology

Any attempt to impute Hispanic ethnicity has limitations, since imputed ethnicity may not accord with self-identification, particularly for individuals who have mixed ancestry, and imputation cannot identify individuals as members of specific Hispanic subgroups.

Based on the experience of the New Jersey State Cancer Registry, Spanish surname methodology can increase the number of people identified as Hispanic from death certificates. This method has been used by cancer registries in many states. However, some limitations and cautions should be noted:

- This method does not adjust for underreporting of individuals of Hispanic origin who are of Haitian or Dominican ancestry, since these birthplaces are excluded from consideration by the algorithm.

- Use of the algorithm will not address any misclassifications of race, so that crosstabulations of race and ethnicity may still be inaccurate.

- Use of the algorithm will not greatly affect population estimates which are used as denominators. However, there may be increased inflation of mortality rates because of undercounts of the number of Hispanics in the total population.

- The method of collecting race and ethnicity information has been changed for the 2000 Census. It seems inappropriate to adopt a 1990-based technique until more current information is available about the Hispanic population.

- In addition, if this methodology is used for mortality statistics other than those produced by the NJ Cancer Registry, New Jersey mortality rates will be produced by a method which is different from that used in most other states and by the NCHS. This will require notations referring to the methodology in all statistics released by New Jersey, so that other states can make comparisons appropriately.

CONCLUSIONS

After reviewing the information obtained from the NCHS, other states, and health researchers, the CSHP project team reached several conclusions.

- State practices in producing mortality data accord with the NCHS guidelines as outlined in the Model State Vital Statistics Act and Regulations and associated publications. None of the states we contacted adjust the assignment of Hispanic ethnicity before forwarding their death certificate information to NCHS.

- The NCHS and state vital statistics staff are concerned about the likely underreporting of individuals of Hispanic origin in mortality data. NCHS has made some effort to quantify the amount of underreporting, but few states have undertaken formal study of underreporting within their own vital statistics. Estimates of underreporting of Hispanic ethnicity on death certificates range from 5 to 29 percent. It is likely that underreporting varies among Hispanic subgroups.

- Only a few states report making adjustments to their mortality data by developing their own population estimates before reporting rates for race and Hispanic origin.

- No state we contacted currently makes adjustments for underreporting of Hispanic ethnicity before publishing mortality statistics, with the exception of cancer registries. The Illinois State Cancer Registry and the New Jersey State Cancer Registry have used an algorithm for identifying Hispanic ethnicity which they have applied to both cancer incidence and cancer mortality data.

- Consistent evidence shows that Asians and American Indians as well as Hispanics are undercounted in vital statistics and population data. As Asians become a larger part of the population, it is likely that similar concerns about identifying individuals of Asian heritage will arise. Any approach to improve vital statistics which focuses only on the correct identification of people of Hispanic origin will miss the opportunity to improve identification of members of other minority groups.

Recommendations

The CSHP project team recommends that OPR/CHS publish mortality statistics for people of Hispanic origin using unadjusted data. We recommend that the Spanish surname algorithm not be adopted at this time. Use of this method would introduce discontinuity into New Jersey mortality statistics at a time when the collection of race and ethnicity information is being altered in the 2000 Census enumeration. In two or three years, use of the algorithm should be reevaluated. Improved methods of obtaining race and ancestry information in the 2000 Census may produce less undercounting of Hispanics in the population, which will minimize the risk of inflating mortality rates when using imputation of Hispanic ethnicity.

However, we also recommend that resources be made available to continue to improve the uniformity with which funeral directors obtain identification of race and Hispanic ethnicity at the time they complete the death certificate to ensure consistent reporting. This can be accomplished by ongoing professional education stressing the importance of race and ethnicity information for vital statistics and health research purposes and by providing a standard procedure for obtaining this information. The ability of funeral directors to apply a standard approach would be enhanced by videotaped examples of recommended methods. The education of funeral directors should not be considered a one time effort, but ongoing attention should be paid to issues of race and ethnicity as the composition of New Jersey residents changes.

We recommend the following:

- Providing training material to be used in the Funeral Director Program at Mercer County Community College
- Providing information to be mailed to funeral directors at the time of license renewal.
- Developing training materials to be included in continuing education courses offered by the Funeral Directors Association.
- Providing speakers at meetings of the Funeral Directors Association to high light the importance of accurate race and ethnicity information.

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