

A Demographic Portrait of the Oldest Old

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POPULATION GROWTH IS A PHENOMENON THAT IN the United States in recent decades has generally been associated with an increase in fertility. The post-World War II “baby boom” caused a new surge in the annual birth and growth rates in the United States. By its very nature, an increase in the birthrate attracts considerable attention. Population cohorts of increased size create demand for additional hospital maternity wards, school buildings, housing, and other consumer goods and services.

Population growth through decreased mortality, however, may not attract as much attention. This type of population increment tends to occur more slowly and often is distributed over a number of age groups, further lessening its visibility. When mortality rates decline in a segment of the population that has had relatively stable rates and when these declines are most pronounced in a seldom-studied age group, the result is a population expansion that is barely noticed. The oldest old have been undergoing exactly such a population expansion. Since this subpopulation has certain characteristics that imply greater need, and if much of this need must be met through government assistance, it is desirable that this age group should be carefully examined. Knowledge produces preparedness. In this paper we will

first discuss the growth in numbers of the very old; then we will discuss their characteristics, and finally we will discuss the implications of both.

Before exploring in depth the statistical data on the oldest old it may be observed that the questionable reliability of age reporting for the extreme aged population in the United States has long been considered a serious hindrance to demographic research (Shryock, Siegel, and associates 1973). Given the history of reliability problems, some researchers have tended to overlook the vast improvements that have been made in the accuracy of age reporting in recent years. A review of several studies that have looked at the possible extent of deficiencies in Census Bureau statistics of the extreme aged by means of comparisons derived from alternative sources (e.g., death records, Medicare enrollment figures) concludes that whatever error exists in the estimates of the population aged 85 and over has probably been fairly small in recent years (Rosenwaike 1985). Furthermore, since the advent of the Medicare program with its detailed annual statistics by age, we have a more reliable and efficient instrument for observing certain current trends than was possible by means of the decennial census.

Although it is still not widely recognized, persons aged 85 and over—the oldest old—currently constitute the most rapidly growing portion of the American population. This is true for most other industrialized nations as well. Between the 1960 and 1980 censuses, the oldest old increased by 141 percent in the United States, a rate far in excess of that of all persons aged 65 and over (54 percent), or that of the total population (26 percent). This rapid growth of the extreme elderly is not new. In the previous twenty-year span, 1940–1960, this group grew just as rapidly, by 154 percent (table 1). What is new is the fact that the sheer number of persons aged 85 and over is now of sufficient magnitude to have a major impact on the health care and social service systems. Furthermore, unless there are unprecedented reversals in the long-term pattern of mortality decline, the extreme elderly will continue to show highly disproportionate advances in number in the foreseeable future. The growth of the very old merits careful consideration.

Historically, the number of persons aged 85 and over has been greater at each census because successive population cohorts were larger in childhood than previous ones. Mortality decline has been an important phenomenon throughout the twentieth century, but until the period

TABLE 1
 Estimates and Projections of the U.S. Population Aged 85 and Over:
 1940 to 2040

| Year (July 1) | Number in thousands | Percent increase in preceding period | |
|-----------------------------|------------------------|--------------------------------------|-----------------------|
| | | Population 85 + | Total U.S. population |
| ESTIMATES | | | |
| 1940 | 370 | — | — |
| 1960 | 940 | 154 | 37 |
| 1980 | 2,271 | 142 | 26 |
| PROJECTIONS (middle series) | | | |
| 2000 | 4,926 | 117 | 18 |
| 2020 | 7,081 | 44 | 11 |
| 2040 | 12,834 | 81 | 4 |

Source: Bureau of the Census 1965, 1984.

around World War II, it was concentrated in infancy and childhood, contributing to a relative increase in the proportion of young people in the population. (At the same time, declining fertility was resulting in relatively higher proportions at the elderly ages.) Since at least 1940, the major reason for the spectacular increase in the number of the oldest old has been declining mortality. In recent decades death rate declines at the older ages have been as large or larger than those at younger ages, resulting in unprecedented numbers of persons reaching extreme old age (National Center for Health Statistics 1982; Crimmins 1981; Rosenwaike, Yaffe, and Sagi 1980). A sharp downturn in mortality from cardiovascular disease is largely responsible for declining death rates. Projections of continuing declines in mortality among the aged are a major factor in accounting for the large increases anticipated in the future size of the oldest old population.

The Bureau of the Census (1984), in its most recent projections, shows an increase of 117 percent in the number of oldest old between 1980 and 2000 and another increase of 44 percent between 2000 and 2020, based on its "middle" assumptions regarding mortality. The middle assumption of the Bureau of the Census is consistent with the most recent projections made by the Social Security Administration which assumes that relatively rapid declines in mortality rates, although somewhat smaller than those of the recent past, would continue to the year 2005. After that date, mortality rates are projected to decrease

somewhat more slowly. Male life expectancy in the middle series is projected to increase from 70.6 years in 1982 to 75.0 years in 2040. Females, whose current life expectancy at birth is 78.1 years, are projected to attain a life expectancy of 83.1 years by 2040.

In actual numbers, the population aged 85 years and over (middle series) would advance from 2.3 million in 1980 to 4.9 million by 2000 and to over 7.1 million by 2020. The number of oldest old will experience a further dramatic surge when the baby boom cohorts reach advanced ages; by 2040 the population aged 85 years or older is expected to reach almost 13 million (table 1). Certainly the American population of the future will contain a much higher proportion of the oldest old.

Thus, the age distribution of the population in the future will be dramatically different from that of the past and present. The scope of population change at the young ages that will be produced by mortality improvement is minimal since an overwhelming proportion of persons now survive to maturity and even old age. If we accept the conclusion of the Census Bureau, that the continuation of the recent improvement in mortality at the old ages will greatly increase the proportion of the population at very advanced ages, then it is important to ascertain the characteristics of this population.

Demographic Characteristics

The demographic analysis of population subgroups among the elderly is a relatively new phenomenon. The elderly are now recognized to be an extremely diverse group, spanning a 30 to 35-year age range (Soldo 1980). This large group is no longer viewed as homogeneous in social, physical, and cultural characteristics, but is acknowledged to be composed of very dissimilar populations. Among the new designations for subpopulations among the aged, the most popular are the "young old" and the "old old." Like the term "elderly" itself, definitions of the latter population vary. These include persons aged 75 years and over (Neugarten 1974; Streib 1983), 80 years and over (Siegel and Hoover 1982), and 85 years and over, termed the "extreme aged" (Lopez and Hanada 1982). Any definition is arbitrary. Neugarten's distinction (1982) between young old and old old, however, is not based solely, or even primarily, on chronological age, but rather on health status and social characteristics. Streib's description of the "frail

elderly" takes account of both age and ability to function independently. Both researchers have recognized that although age and functional condition overlap to a considerable extent in a population, there are many exceptions among individuals.

The definition used here for the oldest old is the population aged 85 and over. The rationale for this choice is twofold: first, demographic statistics are conventionally published in five-year age categories. When a terminal age group such as 75+ or 85+ is used, a pure age criterion is employed, with no attention to functional condition. On the other hand, more than any other age group, it is the population aged 85 and over that most resembles the traditional image of an old age linked to frailty and dependence, illness and death. The characteristics of this population would seem to differ markedly in many respects from those of the younger old. Hence, equating the old old as a functional category with the population aged 85 and over as a statistical artifact serves as a convenient tool and facilitates comparisons with other published data. If the characteristics of the oldest old do greatly differ from those of the younger aged, it is important we know the nature and extent of the differences.

In spite of the awareness by many in the gerontological community of the present and future importance of the extreme aged in American society, data on the demographic characteristics of this population remain relatively undeveloped and sometimes unavailable. In addition to knowing its size, information about the socioeconomic characteristics of a population is essential to understanding its conditions of life. Published United States census data on our oldest citizens are limited and have been available only for the aggregate group aged 85 years and over, with no further subdivision by age.

Surprisingly perhaps, the published reports of the 1980 census contain even fewer cross-tabulations on the social and economic characteristics of this population than did the 1970 reports. The 1970 census, for example, provided information on labor force status and on migration for persons aged 85 years and over, whereas the maximum age category for which data were presented in 1980 was 75 years and over. At both censuses the highest age category presenting education level and income statistics was 75 years and over. However, data showing living arrangements and marital status of those aged 85 years and over were provided in both 1970 and 1980.

The lack of published data, however, does not preclude detailed study of the demographic characteristics of the oldest old. For recent

censuses, there exists an alternative means of studying those characteristics of a population not available from published sources. The Census Bureau has realized that the research community (now with access to increasingly sophisticated computer technology) has increasingly found the published census reports inadequate for its particular purposes. Accordingly, sample tapes from the 1970 and 1980 census basic record files (coded so as to preclude breach of confidentiality rules) have been made available which permit individual users freedom to retabulate or manipulate data for a small sample of those enumerated to their own specifications.

At the 1970 census the Census Bureau made three files available for purchase, each containing a 1 percent national sample of persons and housing units "drawn from the population covered by the census 15 percent sample and three from the population in the census 5 percent sample" (Bureau of the Census 1972).

At the 1980 census these computerized files, now designated public-use microdata samples, consisted of "three mutually exclusive samples, the A sample including 5 percent of all persons and housing units, and the B and C samples each including 1 percent of all persons and housing units" (Bureau of the Census 1983). The public-use microdata samples of the decennial censuses of population and housing provide social scientists with a valuable resource for examining various cross-classifications of personal characteristics that would not otherwise be available. In the present paper, to produce a comprehensive portrait of the extreme elderly, 3 or 4 percent public-use samples have been used for 1970 data depending on availability and the combined B and C samples (so far as possible) for 1980 data.

Studies of aged populations, whether cross-national or of specific subgroups, generally have made efforts to provide data on the characteristics of the group examined. Many, if not most, such items here discussed are based on census sources giving information on such factors as gender, marital status, living arrangements, race, nativity, and socioeconomic status (education, labor force participation, income, and poverty status).

Some detailed data on age groups, while present to some extent in the decennial census, may be better observed through the use of annual Medicare enrollment tabulations, and these are presented to illustrate more clearly the recent aging trend of the oldest old. A variety of health characteristics appear in various surveys conducted by the National Center for Health Statistics (also the source of official

mortality statistics), and these have been cited. Since health status is a major determinant of dependency (and potential public need) this characteristic is particularly important in view of the imminent growth of the oldest old.

Using the available sets of data, including the public-use microdata samples, we are going to compare the two ends of the old age spectrum. Comparison of the demographic characteristics of the population aged 85 and over with those of the youngest group of older persons, those 65 to 69 years of age, can reveal how distinctly different the oldest old population is from other "old" persons. Indications are that the oldest old population suffers disproportionately from the losses of family ties and is more dependent upon government services and housing.

Gender

Perhaps in no feature are the oldest old so unique as in their relative numbers of males and females. Reductions in mortality over the years have benefited females substantially more than males. At every age, male mortality exceeds female mortality. At the older ages, where death rates are highest, the sex ratio (the number of males per 100 females) has shown the greatest imbalances, "and these imbalances have increased as the male-female gap in mortality has widened" (Davis and van den Oever 1982). A revolutionary imbalance of the sexes has occurred at the oldest ages. The 1980 census indicated that there were 80 males for every 100 females at ages 65 to 69 years, but only 44 men for every 100 women at ages 85 years and over.

The figures below show the rapid decline in the sex ratio (males per 100 females) of the population aged 85 and over at successive decennial censuses in the past half-century:

| Year | Sex Ratio |
|------|-----------|
| 1930 | 75.4 |
| 1940 | 75.0 |
| 1950 | 69.8 |
| 1960 | 63.9 |
| 1970 | 53.3 |
| 1980 | 43.7 |

Even at the most advanced ages, the sex ratio continues to decline with increasing years. According to the 1980 census there were 46 males for every 100 females at ages 85 to 89 years and 36 males for every 100 females at ages 95 to 99 years.

Marital Status

The very pronounced differences in the marital status distribution of elderly males and females are largely explained by the imbalances in the sex ratio, but other factors are also important, namely the tendency for men to marry women some years younger than themselves and the greater likelihood of remarriage for males. The data in table 2 record that almost half (48 percent) of all men aged 85 years and over enumerated in 1980 were currently married, compared to only 1 of every 12 women. The old old of both sexes were much less likely to be currently married than the young old. A majority (55 percent) of women aged 65 to 69 years, for example, were married, as were 4 out of 5 men. The vast majority (82 percent) of old old women in 1980 were widowed, compared with only about one-third of those aged 65 to 69 years. (About 6 percent of males aged 85 and over and 8 percent of females had never married.) Young old males were rarely widowed (7 percent), although this status was common among the old old (44 percent).

As a result of increased longevity, each successive decennial census has generally reported a higher proportion of persons in the various five-year age groups among the aged as currently married. However, among women aged 85 and over, there has been only a slight change in the most recent 30-year period: from 7.0 percent married in 1950 to 8.4 percent in 1980. Among males, the proportion of those aged 85 and over who were married increased from 33.6 percent in 1950 to 48.4 percent in 1980. This increase reflects gains in female life expectancy. The 1980 census was the first to show that more extreme aged males were married than were widowed. About 54 percent of all males 85 to 89 years of age in 1980 were currently married compared with only about 38 percent of those aged 90 or older.

Recent studies have indicated that marital status and the availability of kin are important factors in determining the household status of elderly persons (Thomas and Wister 1984; Wolf 1983). As might be

TABLE 2
Selected Characteristics of the "Young Old" and "Oldest Old,"
United States, 1970 and 1980

| Characteristics | 1970 | | 1980 | |
|---|----------------|----------------|----------------|---------------|
| | 65-69 years | 85 + years* | 65-69 years | 85 + years |
| Sex ratio: (males/100 females) | 80.7 | 53.3 | 80.0 | 43.7 |
| Percent currently married: | | | | |
| Males | 80.6 | 42.4 | 83.0 | 48.4 |
| Females | 52.0 | 9.9 | 54.8 | 8.4 |
| Percent widowed: | | | | |
| Males | 8.8 | 47.0 | 7.3 | 43.8 |
| Females | 36.5 | 79.0 | 33.8 | 81.8 |
| Percent in families: | | | | |
| Males | 83.9 | 60.4 | 85.4 | 58.9 |
| Females | 67.2 | 47.9 | 66.8 | 36.7 |
| Percent living in households alone or with nonrelatives: | | | | |
| Males | 13.8 | 24.2 | 12.9 | 24.1 |
| Females | 30.5 | 29.0 | 31.5 | 35.6 |
| Percent in institutions: | | | | |
| Males | 1.8 | 14.3 | 1.4 | 16.1 |
| Females | 1.6 | 21.9 | 1.3 | 26.3 |
| Education: | | | | |
| Percent high school graduates | 30.5 | 23.0 | 45.1 | 30.0 |
| Percent 8+ yrs. of school | 70.9 | 60.1 | 81.2 | 66.6 |
| Race and nativity: | | | | |
| Percent black | 9.0 | 7.6 | 8.8 | 7.1 |
| Percent foreign born | 12.8 | 18.6 | 7.8 | 18.6 |
| Percent in labor force: | | | | |
| Males | 39.0 | 6.8 | 29.2 | 4.2 |
| Females | 17.2 | 3.4 | 15.0 | 1.5 |
| Percent below poverty level | 21.6 | 37.1 | 11.6 | 21.3 |
| Median income in previous year: | | | | |
| Males | \$3,616 | \$1,668 | \$8,584 | \$4,797 |
| Females | \$1,558 | \$1,171 | \$3,819 | \$3,284 |

Source: Bureau of the Census (1970 and 1980 censuses and public-use microdata samples).

* Data for the 85+ population in 1970 from the public-use samples exclude centenarians since the group aged 100 and over was seriously overstated in published sources.

expected, the marital status of the institutionalized population aged 85 years and over varies markedly from the noninstitutionalized. The single and childless are more likely to live in institutions than those with families (Rice and Feldman 1983).

In table 3 the distribution by marital status, by sex, of the oldest old residing in institutions and outside institutions is compared. Relative to very aged males living in the community, the institutionalized include far fewer married persons and many more widowed, divorced, and never married. Among extreme aged females, marital status differences are much less apparent. For both institutionalized and non-institutionalized women, more than 80 percent are widowed. However, substantially lower percentages of institutionalized than of noninstitutionalized women are currently married and substantially higher percentages have never married (table 3).

Living Arrangements

Marital status variations are important in accounting for differences in living arrangements of older men and women. Because males are much more likely to be married than are females they are more likely to live in a family setting. A majority of all males aged 85 years and older (59 percent) live in families compared with only approximately one-third of females (37 percent) in this age group. By contrast, two-thirds (67 percent) of all females aged 65 to 69 years live in families, as do the overwhelming share (85 percent) of all males (table 2).

In 1980 almost 36 percent of all women aged 85 years and over lived in single-person households, or in households with only nonrelatives present, substantially more than the 29 percent recorded in 1970. Myers and Nathanson (1982) observe that "this trend toward independent living, which is shared by males to a lesser extent, has persisted over several decades and appears to be characteristic of many developed countries." Concomitant with this trend toward independent living, there has been a sharp decline in the proportion of both elderly males and females who live in a household with relatives (usually their children) other than a spouse.

In 1950, 32 percent of all men aged 85 years and over who lived outside of group quarters lived in a household headed by a child or the child's spouse; the proportion plummeted to only 9 percent in

TABLE 3
Percent Distribution by Marital Status of Noninstitutionalized and of Institutionalized Persons 85 Years Old and Over, by Sex, 1980

| Residential status | Total | Male | Female |
|-----------------------------|-------|-------|--------|
| NONINSTITUTIONALIZED | | | |
| Married | 24.2 | 53.1 | 9.8 |
| Widowed | 67.1 | 39.6 | 80.8 |
| Divorced | 2.1 | 1.9 | 2.2 |
| Separated | 0.5 | 0.9 | 0.4 |
| Never married | 6.1 | 4.5 | 6.9 |
| Total* | 100.0 | 100.0 | 100.0 |
| INSTITUTIONALIZED | | | |
| Married | 8.1 | 22.7 | 4.3 |
| Widowed | 78.2 | 62.1 | 82.4 |
| Divorced | 2.0 | 3.2 | 1.6 |
| Separated | 0.5 | 0.7 | 0.4 |
| Never married | 11.3 | 11.3 | 11.3 |
| Total* | 100.0 | 100.0 | 100.0 |

Source: U.S. Bureau of the Census, 1980 public-use microdata samples.

* Due to rounding, columns may not sum to exactly 100 percent.

1980. Similarly, in 1950 almost 47 percent of all women aged 85 and over not living in group quarters resided in the household of a child or child's spouse. This proportion declined drastically to only 18 percent in 1980.

The figures below contrast the remarkable increase from census to census in the percentage of the oldest old residing in institutions with the relatively stable pattern among the youngest old:

| Year | Persons Aged 65 to 74 | Persons Aged 85 and Over |
|------|--------------------------|-----------------------------|
| 1950 | 2.1% | 9.4% |
| 1960 | 2.2 | 13.8 |
| 1970 | 2.1 | 19.3 |
| 1980 | 1.8 | 23.2 |

Another significant trend is the increasing proportion of extreme elderly, particularly women, residing in institutions. Table 2 records

that the percentage of all women aged 85 and over living in nursing homes and other long-term care facilities climbed from 22 percent in 1970 to 26 percent in 1980. During the same period the percentage of men increased from 14 to 16 percent. In sharp contrast, less than 2 percent of all persons aged 65 to 69 years required institutionalization in 1970 and the proportion declined by 1980.

Race and Nativity

The old old differ in a number of other demographic characteristics from the young old. The foreign born constitute almost 19 percent of the total United States population aged 85 and over, but represent about 8 percent of the young old. Blacks, on the other hand, account for almost 9 percent of the United States population aged 65 to 69 years, but are only about 7 percent of the old old.

The foreign born have substantially declined as a proportion of the total old old population. In the first quarter of this century they accounted for as much as 30 percent of the population aged 85 and over. Their relative decline reflects the reduced levels of immigration after World War I and the build-up of native-born cohorts of old old. Blacks have accounted for a smaller share of the old old nationally in recent censuses than in earlier counts. However, the proportional decline is very likely spurious since it probably reflects substantial improvement in age reporting and a diminished tendency by the elderly to exaggerate age.

Socioeconomic Status

Long-term trends which continued during the 1970s included marked advances in the educational status of older persons (as better educated cohorts replaced less well educated ones) and declines in labor force participation due to Social Security and pension benefits that enabled more persons to retire at earlier ages. Approximately 30 percent of all young old (65 to 69 years) men and women in 1970 had at least a high school education; by 1980 the figure was 45 percent. The percentage of old old who had completed high school was considerably smaller—23 percent in 1970 and 30 percent in 1980.

In 1980, 29 percent of males 65 to 69 years old were working or looking for work. For males 85 and over the comparable figure was 4 percent, down from almost 7 percent a decade earlier. Labor force participation among women was about half that for men among all categories of old people (table 2).

In 1970 the poverty rate for Americans 60 years of age and older was almost twice as high as the rate for persons under age 60. Since the late 1960s, as a result of “the enactment of large increases in benefits and a cost-of-living escalator clause for the Social Security program, the increasing coverage of older persons under a variety of public and private pension plans, and the implementation of new income support programs—such as SSI [Supplementary Security Income], Medicare, Medicaid—and property tax relief”—the relative economic situation of the older population improved dramatically (Fowles 1983). This remarkable change meant that in 1981 the poverty rate of the group aged 60 and over was about the same as that of the under-60 age group. The oldest old also have experienced an overall decline in poverty in recent years but continue to have a high poverty rate relative to younger persons. According to the 1970 census, about 37 percent of persons aged 85 years and over had incomes below the federal government’s poverty index; this fell substantially (to 21 percent) by 1980. At the same time, about 12 percent of all persons aged 65 to 69 years had incomes below the official poverty threshold.

Age Group Patterns

Although statistics appear by single years of age in the census, such data are available only decennially. Furthermore, both the rounding-off of age at five-year intervals by individuals and errors in the processing of census data have marred some of the published results. As pointed out earlier, Medicare enrollment data have certain advantages over census data; one of these is that they more readily permit examination of trends in the growth of groups included in the population aged 85 and over. This is especially useful in view of the interest in the very oldest persons, the centenarian population who, although they account for a mere 1 percent of all persons aged 85 and over, have been subject to disproportionate attention (Siegel and Passel 1976).

Table 4 records that when the years 1970 to 1982 are divided into

TABLE 4
Persons 85 Years Old and Over in Medicare Program, by Age and Sex,
January 1, 1970 to January 1, 1982

| Age (years) | Medicare population* | | | Percent increase | |
|----------------|----------------------|-----------|-----------|------------------|---------|
| | 1970 | 1976 | 1982 | 1970-76 | 1976-82 |
| TOTAL | | | | | |
| 85 and over | 1,378,523 | 1,852,445 | 2,458,931 | 34.4 | 32.7 |
| 85-89 | 1,021,434 | 1,319,359 | 1,683,001 | 29.2 | 27.6 |
| 90-94 | 294,270 | 429,276 | 606,479 | 45.9 | 41.3 |
| 95 and over | 62,819 | 103,810 | 169,451 | 65.2 | 63.2 |
| MALE | | | | | |
| 85 and over | 470,830 | 584,987 | 717,523 | 24.2 | 22.6 |
| 85-89 | 359,259 | 428,875 | 511,654 | 19.4 | 19.3 |
| 90-94 | 93,258 | 128,392 | 163,786 | 37.7 | 27.6 |
| 95 and over | 18,313 | 27,720 | 42,083 | 51.4 | 51.8 |
| FEMALE | | | | | |
| 85 and over | 907,693 | 1,267,458 | 1,741,408 | 39.6 | 37.4 |
| 85-89 | 612,175 | 890,484 | 1,171,347 | 34.5 | 31.5 |
| 90-94 | 201,012 | 300,884 | 442,693 | 49.7 | 47.1 |
| 95 and over | 44,506 | 76,090 | 127,368 | 71.0 | 67.4 |

Source: Social Security Administration and Health Care Financing Administration (unpublished tabulations).

* Persons shown in tabulations as 120 years and over have been excluded.

two six-year periods, each period shows that the number of persons 95 years and over increased at about twice the rate for the aggregate population aged 85 years and over. Those aged 85 and over increased by 34 percent between 1970 and 1976 and by 33 percent between 1976 and 1982. During this 12-year period an increase of more than 1 million to almost 2.5 million was recorded. The number of persons aged 95 years and over grew by 65 percent and 63 percent in these two respective time spans. The total population aged 95 years and over registered an impressive increase, from about 63,000 in 1970 to 169,000 by 1982. In summary, whereas the number of persons from 90 to 94 years of age more than doubled between 1970 and 1982, the population aged 95 and over almost tripled in size during the course of this 12-year span.

Health

The health of the elderly population is of considerable interest to demographers. Siegel (1980a, 351) has emphasized that "there are important interrelations between the health of older persons and demographic changes." Anticipated demographic changes are certain to affect the demand for health care and the provision of health services. Recent projections made by the Social Security Administration (1983) indicate that today's adults have an excellent chance of joining the very old in the future. According to the administration's projected United States life table (which assumes a moderate level of mortality decline in the future), one of four males who will be 60 years of age by the end of this decade can expect to reach age 85. For females, the proportion will be almost one in two.

The attainment of extreme old age is frequently accompanied by a multiplicity of chronic health problems. When chronic disability occurs, the oldest old either need assistance with the tasks of daily living in order to continue living in their community setting or must enter a nursing home or other institution. Data from the 1979 National Health Interview Survey and from the 1977 National Nursing Home Survey (National Center for Health Statistics 1979, 1983) indicate that the need for help rises very sharply with age. A basic physical activity, such as walking, may be used as an example. Only about 1 in 20 of those aged 65 to 74 years—institutionalized or noninstitutionalized—needs assistance in walking, compared with 4 in 10 of those aged 85 or over. About 3 out of 4 of the extreme elderly living in institutions and 1 out of 4 of the noninstitutionalized need assistance in walking. More than 70 percent of those aged 85 and over require assistance in connection with some of their normal daily activities, whereas only 10 percent of those aged 65 to 74 are in this category (Johnston and Hoover 1982). A very substantial proportion of the very old thus need another person's help in order to carry out simple everyday activities. This stronger likelihood of dependency is a distinguishing feature of the oldest old as a group. Hospital utilization also increases significantly with age. In the 65 to 74 age group there are 306 hospital stays per 1,000 persons; the figure jumps to 507 per 1,000 for those aged 85 and above. In addition, the latter individuals remain in the hospital longer and have more surgery. Of those 65 to

74 years of age, only 1 in 100 is a nursing home resident; for ages 85 and over, the ratio is more than 1 in 5.

Conclusion

In profile, the fastest growing segment of the population consists of persons over age 85. The majority of these oldest old are white and female, better educated, and with a higher income than past cohorts of this age. Most are widowed and live alone. Yet, demographic statistics, dealing as they do with purely quantitative information, present only a partial view of the complex social issues raised in connection with the extreme elderly population. The aging of the elderly population, along with accompanying changes in their social and economic characteristics, has profound implications for society as well as for the individuals themselves. In particular, "because there is such a high correlation between advanced age and increased functional disabilities, the United States can expect an intensified demand for health and social services, especially for costly long-term care, and a greater strain on government and fiscal resources" (Barberis 1981). The coexistence of declining mortality with increasing morbidity now being documented by researchers (Verbrugge 1984) reflects the growing capability of the health care system to facilitate the survival of even those persons with severe chronic disorders into extreme old age. But the enormous costs of medical care cannot be borne by individuals living on limited post-retirement income and assets. Hence, the quantity and quality of life in extreme old age are broad-ranging social problems, with government being viewed more and more as the agent responsible for the financial needs of the aged (Jackson 1980). The likelihood of a decline in the proportion of elderly persons who have living relatives will also "necessitate a greater role of government in the support of the elderly, particularly in providing health and other services" (Siegel 1980b). At the same time, rising levels of income and education among the elderly imply a demand for more and better health care and other programs tailored to their needs, as well as a greater ability to seek out such services.

Neglected by demographers for many years, the oldest old can no longer be ignored. What has been presented here is a sketch of a

population subgroup whose spectacular growth, unique characteristics, and unprecedented need for social services are certain to bring about broad changes in American life in the coming decades.

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