

**VITAL and HEALTH STATISTICS**  
DATA FROM THE NATIONAL HEALTH SURVEY

**characteristics of  
Persons with  
Corrective Lenses**

**United States - July 1965 - June 1966**

Statistics on persons aged 3 years and over by selected demographic characteristics, age when corrective lenses were first obtained, type of prescription, usage, and source of examination if examined in past 2 years. Based on data collected in household interviews during the period July 1965-June 1966.

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
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### COOPERATION OF THE BUREAU OF THE CENSUS

Under the legislation establishing the National Health Survey, the Public Health Service is authorized to use, insofar as possible, the services or facilities of other Federal, State, or private agencies.

In accordance with specifications established by the National Health Survey, the Bureau of the Census, under a contractual arrangement, participates in most aspects of survey planning, selects the sample, collects the data, and carries out certain parts of the statistical processing.

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*IN THIS REPORT statistics on persons with corrective lenses—eye-glasses and/or contact lenses—are presented for the first time in the Health Interview Survey. The estimates, based on data collected during the period, July 1965–June 1966, cover the civilian, noninstitutional population 3 years of age or older and show the distribution of corrective lenses by selected demographic characteristics of the population. Information is also presented on: (1) the age at which persons first obtained corrective lenses, (2) the type of prescription (correction of near or distance vision) and the frequency with which the lenses were used, and (3) the source of the optical prescription.*

*During the interview year approximately 86,020,000 persons, representing about one-half of the population, were estimated to have corrective lenses. The proportion with lenses increased with age, ranging from 15 percent of those 3–16 years of age to 88 percent among persons 45 years and older. About 59 percent of the females 45 years and older with lenses had obtained them before reaching age 45 compared with 42 percent of the males. About 49 percent of the persons 3 years and older with lenses used them for the correction of both near and distance vision.*

*Of the 49,267,000 persons who had obtained corrective lenses during the 2-year period prior to interview, about 98.6 percent had an optical examination for the fitting of lenses. Of those persons who were examined, 33.4 percent were examined by an ophthalmologist; 56.7 percent by an optometrist, and 1 percent by an optician, by personnel in optical stores or clinics, or by a medical doctor other than an ophthalmologist. There was no available information on the source of prescription for the remaining 8.9 percent.*

#### SYMBOLS

Data not available-----	---
Category not applicable-----	...
Quantity zero-----	-
Quantity more than 0 but less than 0.05----	0.0
Figure does not meet standards of reliability or precision-----	*

# CHARACTERISTICS OF PERSONS WITH CORRECTIVE LENSES

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## SELECTED FINDINGS

Approximately 86,020,000 persons were estimated to have had corrective lenses of some type (eyeglasses and/or contact lenses) during the interview year July 1965-June 1966. This figure represents about half of the total civilian, noninstitutionalized population 3 years and over. Approximately 97.9 percent of the persons with corrective lenses had eyeglasses only. The proportion of the population owning corrective lenses increased with age, ranging from 15.0 percent for persons 3-16 years of age to 88.0 percent for persons 45 years and over. The largest group proportionately of persons with contact lenses were those 17-24 years of age which represented 3.7 percent of the total population in the age group. About three-fourths of those with contact lenses in this age group were females.

Among persons under 25 years of age at the time of interview with corrective lenses, approximately 72 percent of both males and females had first obtained their lenses before reaching age 17. However, females 25 years and over at the time of interview obtained correction much earlier than did males of comparable age. This sex differential was greatest among those 45 years of age and older, with approximately 59.1 percent of the females and 41.8 of the males obtaining corrective lenses for the first time before reaching age 45.

A high proportion (84.8 percent) of those with corrective lenses had prescriptions for reading and close work. However, this proportion is

strongly influenced by changes in visual acuity associated with the aging process; 94.6 percent of the population 45 years and over had this type of corrective lenses compared with 71.6 percent of the people under 45 years.

Approximately 57.3 percent of all persons with eyeglasses and/or contact lenses 3 years of age and over had obtained their most recent lenses within 2 years of the date of interview. High family income (\$5,000 or more) and educational level of the head of the family (13 years or more) were characteristic of the population receiving recent eye examinations from ophthalmologists. Of the persons who had been examined during the 2 years prior to interview, approximately 36.9 percent of those with family incomes of \$5,000 or more and 50.1 percent of those in families whose head had 13 years or more of education had visual examinations from ophthalmologists. Approximately 25.9 percent with the lower family incomes and 28.2 percent in families whose head had less education were examined by this type of medical specialist.

## SOURCE OF DATA

The information in this publication is derived from household interviews conducted for the Health Interview Survey by trained personnel of the U.S. Bureau of the Census in a probability sample of the civilian, noninstitutional population of the United States. The sample is so designed that interviews are conducted during every week

of the year. During the 52-week period from July 1965-June 1966, the sample was composed of approximately 42,000 households containing about 134,000 persons living at the time of the interview.

A description of the design of the survey, of the methods used in estimation, and of general qualifications of the data obtained from surveys is presented in appendix I. Since estimates shown in this report are based on a sample of the population rather than on the total population, they are subject to sampling error. Therefore, particular attention should be paid to the section entitled "Reliability of Estimates." Sampling errors for most of the estimates are of relatively low magnitude. However, where an estimated number of the numerator or the denominator of a rate or percentage is small, the sampling error may be high.

Certain terms used in this report are defined in appendix II. Some of the terms have specialized meanings for the purpose of the survey.

The questionnaire used by the Health Interview Survey during July 1965-June 1966 is illustrated in the publication "Current Estimates from the Health Interview Survey, United States, July 1965-June 1966" (*Vital and Health Statistics, Series 10, No. 37*). For each person 3 years or older with corrective lenses, a series of questions was asked about the usage and the frequency of use of lenses, the age at which the individual first obtained his corrective lenses, and the source of examination if lenses had been obtained during the past 2 years. The questions used to obtain this information are illustrated in appendix III.

The restriction of the survey to the civilian, noninstitutional population living at the time of the survey obviously produces an underestimation of persons with corrective lenses in the total population. The proportion with lenses shown in this report for the age group 17-24 years may not represent the true picture for males in this age group because of the exclusion of members of the Armed Forces. Likewise, the exclusion of the institutional population may distort to some extent the true proportion of older persons wearing corrective lenses.

## DEMOGRAPHIC CHARACTERISTICS

During July 1965-June 1966, about half (48.1 percent) of the civilian, noninstitutional population reported having corrective lenses when interviewed by the Bureau of the Census for the Health Interview Survey (table 1). This represents approximately 86,020,000 persons. Included in this number were 1,773,000 persons with contact lenses, approximately 2.1 percent of those with corrective lenses. The following discussion characterizes the population 3 years or over with corrective lenses by age, sex, geographic region, residence, color, family income, educational level of the head of each family unit, and the occupational status of individuals 17 years or older. Each of these characteristics plays a part in describing the population that has eyeglasses and/or contact lenses. The aging process, the

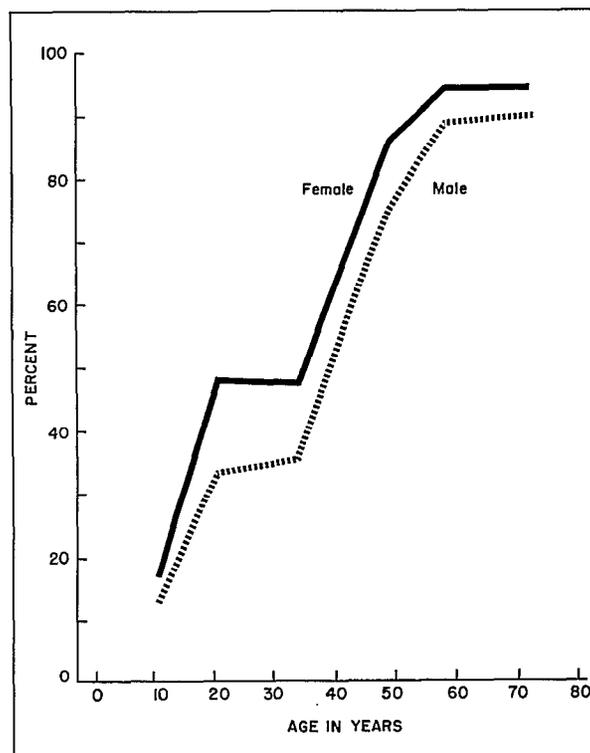


Figure 1. Percent of persons with corrective lenses, by sex and age at the time of interview.

availability and financial means of purchasing ocular services, and the use to which the eye is subjected through daily activities are some of the factors that influence the use of corrective lenses.

### Sex and Age

From data shown in figure 1 it can be seen that the age pattern of persons who use corrective lenses is quite similar for males and females, with the level consistently higher at all age intervals among females. The age curve for each of the sexes displays two well-defined plateaus, the first encompassing the age intervals 17-24 and 25-44 years, and the second spanning the intervals 55-64 and 65 years and over. This curve demonstrates the typical pattern of the need for visual correction. During early childhood and the teens, the need for visual correction usually becomes apparent when a person has difficulty in reading, complains of eye strain, or has other problems related to school activities or employment. Usually by age 20, persons with myopia, strabismus, congenital eye defects, and other conditions causing visual impairment have been identified and corrective lenses have been obtained. As a rule, changes in visual acuity are at a minimum during the age interval 25-44 years; then, during the midforties the gradual deterioration of near vision due to the aging process (presbyopia) leads to an increased proportion of persons in need of corrective lenses. The general prevalence of this condition causes the sharp rise noted in the age curve during the forties and fifties, with another leveling off in the percentage of persons with corrective lenses beyond age 60.

The pattern of the proportion of the population having contact lenses with or without eyeglasses is quite different from that of the age distribution of the general population with corrective lenses. In the age group 17-24 years about 3.7 percent of the population used "contacts," while only 0.3 percent of those 45 years and over had this type of corrective lens (fig. 2). Females greatly predominated over males in the wearing of contact lenses in a ratio of about 2 to 1, 70.1 percent for females and 29.9 percent for males. Among those wearing contact lenses,

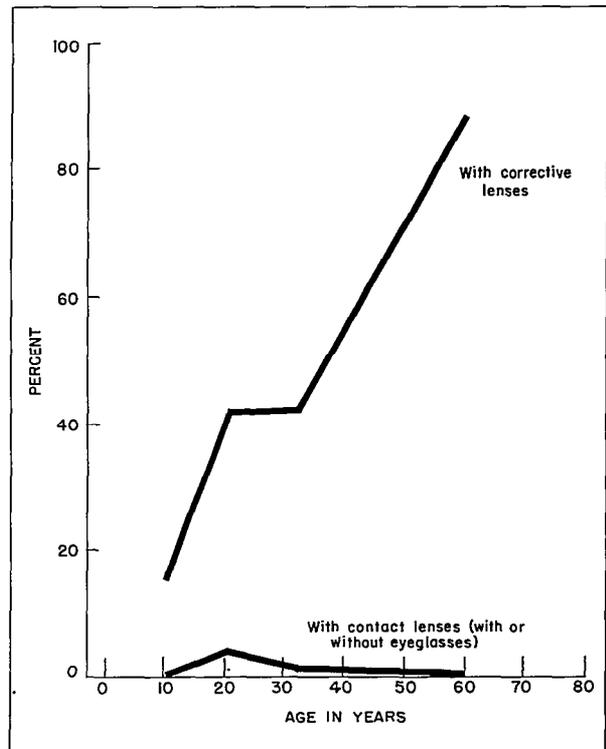


Figure 2. Percent of persons with corrective lenses and with contact lenses, by age at the time of interview.

about 59.9 percent of the females and 46.0 percent of the males were under 25 years of age. This predominance of females over males is probably due to the cosmetic aspects of wearing contact lenses in preference to eyeglasses.

### Region and Age

A smaller proportion of the civilian, non-institutional population 3 years or older living in the South Region (42.8 percent) during July 1965-June 1966 reported having corrective lenses than did persons in the same group for the remaining regions (tables 2 and 3). About 47.0 percent of the population 3 years or older in the West Region and 50.6 percent and 52.5 percent of the same population group in the North Central and Northeast Regions, respectively, reported the ownership of corrective lenses.

The lower proportion of the population in the South Region having corrective lenses probably reflects the large proportion of nonwhite persons who reside in this region, as well as the high percentage of persons with family incomes of less than \$3,000 per year (25 percent in the South Region compared with less than 15 percent in other regions). Both of these groups have comparatively low rates of physician services (*Vital and Health Statistics*, Series 10, No. 49) and therefore would include many persons who have not become aware of the need for corrective lenses. This regional pattern is consistent with the rate of persons who visited an ophthalmologist or optometrist during an average year (*Vital and Health Statistics*, Series 10, No. 28). The region having the largest proportion of persons wearing contact lenses is the West Region where 1.4 percent of the population had "contacts" which were used with or without eyeglasses.

#### **Residence and Age**

Little difference existed in the proportion of the population with corrective lenses residing in metropolitan areas (48.7 percent) and those whose residences were outside these areas (47.0 percent) (table 4). Although there is only a slight difference in the proportion of those persons who have eyeglasses only in the two residential areas, almost twice as many contact lens wearers resided in metropolitan areas (1.2 percent) as elsewhere (0.7 percent). The age distribution was similar for the proportion of persons in both areas except for contact lens wearers, for whom there was a substantially higher rate for persons aged 17-44 years in metropolitan areas than in nonmetropolitan areas.

#### **Color and Age**

About one-half of the white population reported having some type of corrective lenses compared with about one-third of the nonwhite population (table 5). Practically all of the nonwhite persons with corrective lenses had eyeglasses only (99.4 percent), while about 2.2 percent of the white population with corrective lenses used "contacts." Because of the small number of

nonwhite persons in the sample reliable data for the distribution by age for the nonwhite population are not available for those persons with contact lenses.

#### **Family Income and Age**

There was a larger proportion of persons in low income families (less than \$5,000 annually) with corrective lenses during July 1965-June 1966 (49.7 percent) than among persons in the \$5,000 or more annual family income groups (46.7 percent). This difference is largely a result of the disproportionate number of elderly people in the lower income group (table 6). When data for these two groups are adjusted for differing age distributions, approximately 43.8 percent of the persons in lower income families had corrective lenses compared with 50.1 percent of those in the higher income families. Approximately 71.0 percent of the population with corrective lenses and annual family incomes of less than \$5,000 were 45 years or older, while only about 50 percent of the persons with family incomes of \$5,000 or more with some type of corrective lenses were 45 or older.

A higher proportion of people with family incomes of \$5,000 or more (1.2 percent) owned contact lenses than did people in the lower income group (0.7 percent). In each age group the proportion of the population having contact lenses was greater in the higher income group than in the lower income group, with the largest difference in the 25-44-year age group.

#### **Education of Head of Family and Age**

A greater percentage of the population whose family head had completed more than 12 years of education had corrective lenses of some type (51.1 percent) than did persons in family groups where the head of the family unit may have completed only up through the 12th grade (47.2 percent). Differing age distributions exerted less influence on the percentages by educational level than on those by family income level. Age adjustment of the family income data reverses the direction of the difference between the percentage of persons with corrective lenses in the two in-

come groups, with the rate for those with a family income of \$5,000 and over becoming higher; adjustment of the educational status data merely increases the difference in the percentage of persons with corrective lenses noted in the unadjusted data:

	<i>Unad-justed</i>	<i>Age ad-justed</i>
Family income:		
Under \$5,000-----	49.7	43.8
\$5,000+-----	46.7	50.1
Education of head of family:		
12 years or less-----	47.2	46.3
13+ years-----	51.1	54.4

Although the effect of the aging process on the percentage of persons who obtain corrective lenses is apparent in both educational groups, the differences between corresponding age groups by the educational level of the head of the family is greatest in the age intervals 17-24 and 25-44 years (table 7). It is quite possible that persons of these ages living in families whose head had 13 years or more of education would probably be engaged in academic pursuits or in types of employment where the need for visual acuity is greatest. This supposition is borne out in the following section on occupational status and the use of corrective lenses.

While about 0.6 percent of the people who live in family units the head of which had 12 years or less of education used contact lenses, approximately 2.5 percent of those persons in families whose head had completed at least 1 year of higher education had contact lenses. The major part of this difference was contributed by the 17-24 age group where 2.3 percent of those in the lower educational group had contact lenses compared with 8.7 percent of this age group in the higher educational group. Approximately 2.8 percent of those 25-44 years living in families the head of which had completed at least 13 years of school had this type of corrective lenses compared with 0.8 percent in the lower educational group.

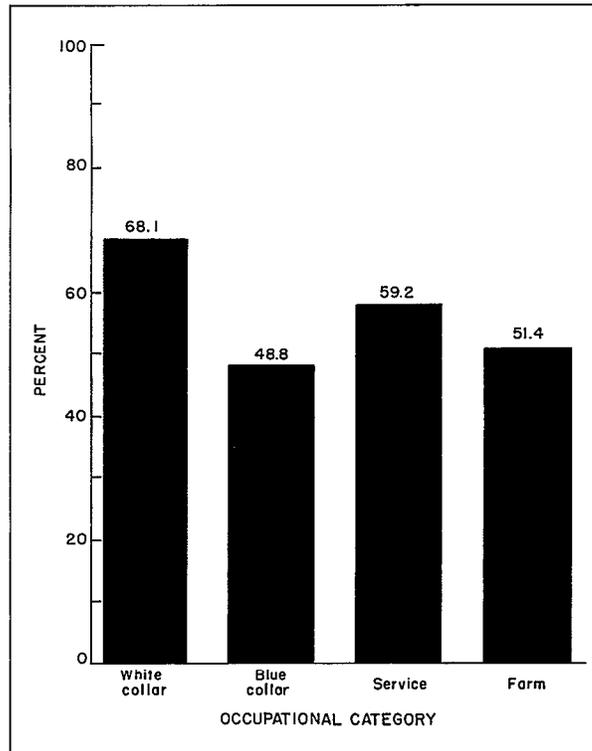


Figure 3. Percent of persons with corrective lenses, by occupational category.

### Occupational Status and Age

Among persons in the labor force, a greater proportion of the population employed in the white-collar jobs had some type of corrective lenses (68.1 percent) than did persons employed in blue-collar jobs (48.8 percent) (tables 8 and 9). However, about 59.2 percent of the service workers and 51.4 percent of farm workers had corrective lenses (fig. 3).

Although there was little variation in the percent of persons 17 years and older having corrective lenses in the white-collar category, among those under 45 years of age 56.9 percent of the professional group and 55.9 percent of the clerical group used corrective lenses compared with 44.2 percent of the managers and 44.9 percent of those in sales positions.

For persons in occupational categories other than white-collar workers, the proportion with corrective lenses became lower with 59.2 percent for service workers, 51.4 percent for farm workers, and 48.8 percent of the persons classified as blue-collar workers.

As has been previously stated, the largest proportion of persons reporting the use of contact lenses with or without glasses is centered in the 17-24 age group. The proportion using "contacts" among white-collar workers in this age group (6.5 percent) was approximately twice that for service workers (3.3 percent). Data for this age group among blue-collar and farm workers were too scanty to provide reliable estimates. Within the white-collar category, the professional (8.1 percent) and the clerical (6.3 percent) workers in the 17-24-year age group were by far the occupational groups having the highest proportion of users of contact lenses.

## AGE AT WHICH CORRECTIVE LENSES WERE FIRST OBTAINED

The distribution of persons with corrective lenses by the age at which correction was first obtained is shown by sex, color, family income, and age at the time of interview in tables 10-12. The estimates shown in these tables have been summarized and presented as cumulative percentages in tables A, B, and C. In the summarized tables, data have been restricted to persons whose age at the time when the lenses were first obtained was known. For this reason the summation of percentages in tables 10-12 will only approximate the cumulative estimates shown in the summarized tables.

Among persons under 25, the age at which males and females first obtained corrective lenses was about the same (table A), even though the proportion of females in the population

Table A. Cumulative percent distribution, by age when first obtained corrective lenses according to sex and age at time of interview: United States, July 1965-June 1966

Sex and age at time of interview	Age when first obtained corrective lenses <sup>1</sup>			
	Under 17 years	17-24 years	25-44 years	45 years and over
<u>Both sexes</u>				
3-16 years-----	100.0	...	...	...
17-24 years-----	72.1	100.0	...	...
25-44 years-----	37.6	63.5	100.0	...
45 years and over-----	9.4	18.1	51.5	100.0
<u>Male</u>				
3-16 years-----	100.0	...	...	...
17-24 years-----	71.9	100.0	...	...
25-44 years-----	30.0	55.5	100.0	...
45 years and over-----	6.5	12.8	41.8	100.0
<u>Female</u>				
3-16 years-----	100.0	...	...	...
17-24 years-----	72.2	100.0	...	...
25-44 years-----	42.6	68.6	100.0	...
45 years and over-----	11.8	22.3	59.1	100.0

<sup>1</sup>Excludes unknown ages.

Table B. Cumulative percent distribution, by age when first obtained corrective lenses according to color and age at time of interview: United States, July 1965-June 1966

Color and age at time of interview	Age when first obtained corrective lenses <sup>1</sup>			
	Under 17 years	17-24 years	25-44 years	45 years and over
<u>White</u>				
Cumulative percent distribution				
3-16 years-----	100.0	...	...	...
17-24 years-----	73.3	100.0	...	...
25-44 years-----	38.7	64.4	100.0	...
45 years and over-----	9.6	18.4	51.9	100.0
<u>Nonwhite</u>				
3-16 years-----	100.0	...	...	...
17-24 years-----	56.9	100.0	...	...
25-44 years-----	25.1	52.7	100.0	...
45 years and over-----	7.1	13.0	45.1	100.0

<sup>1</sup>Excludes unknown ages.

Table C. Cumulative percent distribution, by age when first obtained corrective lenses according to family income and age at time of interview: United States, July 1965-June 1966

Family income and age at time of interview	Age when first obtained corrective lenses <sup>1</sup>			
	Under 17 years	17-24 years	25-44 years	45 years and over
<u>Under \$5,000</u>				
Cumulative percent distribution				
3-16 years-----	100.0	...	...	...
17-24 years-----	71.5	100.0	...	...
25-44 years-----	35.6	61.4	100.0	...
45 years and over-----	7.9	15.4	45.8	100.0
<u>\$5,000 and over</u>				
3-16 years-----	100.0	...	...	...
17-24 years-----	72.3	100.0	...	...
25-44 years-----	38.3	64.2	100.0	...
45 years and over-----	10.8	20.4	56.4	100.0

<sup>1</sup>Excludes unknown ages.

with lenses was much higher than that of males (fig. 1). Approximately 72 percent of those under 25 years in each sex group had corrected vision before the age of 17 years. However, females who were over 25 years at the time of the interview had obtained their corrective lenses much earlier than the males of comparable age. Among those 25-44 years, 68.6 percent of the females with corrective lenses had obtained them before their 25th birthday compared with 55.5 percent of the males. Approximately 59.1 percent of the women and only 41.8 percent of the men 45 years and older had obtained lenses prior to reaching age 45. This sex differential is consistent with the results of visual acuity tests conducted in the Health Examination Survey which showed that "men have better unaided vision than women at both distance and near" (*Vital and Health Statistics*, Series 11, No. 3).

In general, the white population obtained corrective lenses earlier in life than did the nonwhite, particularly among younger persons, with 73.3 percent of white persons 17-24 years of age at the time of interview having first obtained lenses before age 17, compared with 56.9 percent of the nonwhite (table B). While there are also differences in the age at acquisition among persons 25 years of age and over (at the time of the survey), these differences are considerably less than the differential among younger people. Two factors may exert some influence on the late acquisition of lenses in the nonwhite population: (1) lack of medical care, as evidenced by the lower rate of visits among nonwhite persons to physicians (*Vital and Health Statistics*, Series 10, No. 49) and to ophthalmologists and optometrists (*Vital and Health Statistics*, Series 10, No. 28), and (2) less need for visual correction among nonwhite persons. Findings from the Health Examination Survey indicate that "Negro adults, both men and women, were found to have better uncorrected visual acuity at both distance and near than white adults—that is, relatively more reached the equivalent of 20/30 or better and fewer did not exceed the equivalent of 20/100" (*Vital and Health Statistics*, Series 11, No. 25).

The absence of marked differences in the age at which people first obtained corrective lenses among those living in families with annual

incomes of less than \$5,000 and those with incomes of \$5,000 or more would indicate that the cost of corrective lenses is not an important factor in obtaining correction when it is needed (table C).

## TYPE OF PRESCRIPTION AND FREQUENCY OF USE OF CORRECTIVE LENSES

Sample persons who had some type of corrective lenses during July 1965-June 1966 were asked why the corrective lenses had been prescribed and how frequently they were used for the prescription reason. Although data were collected for all types of prescriptions, reasons other than the improvement of near vision, seeing distant objects better, or both were reported too infrequently to permit separate tabulations (see questionnaire, appendix III). Therefore, prescriptions for "other reasons" were processed as one category and no distinction was made for prescriptions for eye conditions such as cataracts, astigmatism, and strabismus. For this reason, analysis of the data by type of prescription and frequency of usage of corrective lenses is limited to those persons reporting defective near vision, distance vision, or both. Persons with lenses for "other and unknown" correction have been shown together in figures 4 and 5. "Other" reasons represent about 70 percent of the category, with this percentage being higher among persons under 45 years.

Approximately one-half (49.0 percent) of all persons 3 years and over with corrective lenses reported that the correction prescription was for both near and distance vision, while 35.8 percent had prescriptions for reading or close work only and 11.5 percent had prescriptions for problems with distance vision only (table 13). Among persons who never used their corrective lenses, 55.3 percent of the lenses had been originally prescribed for the improvement of near vision, 10.9 percent for distance vision, 20.6 percent for both reasons, and 13.2 for other and unknown reasons (fig. 4). The inclusion of 9.1 percentage points for "other" reasons in this last category may indicate prescriptions for the correction of

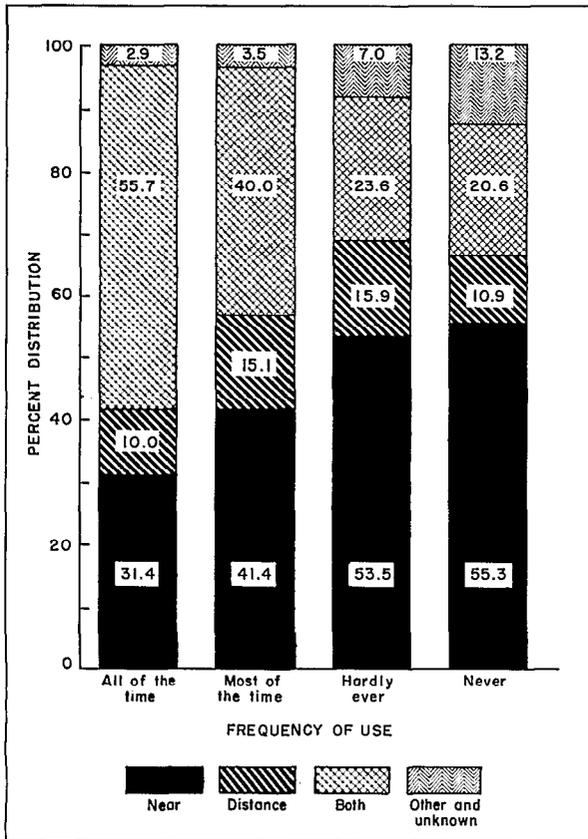


Figure 4. Percent distribution of persons with corrective lenses, by type of prescription according to frequency of use.

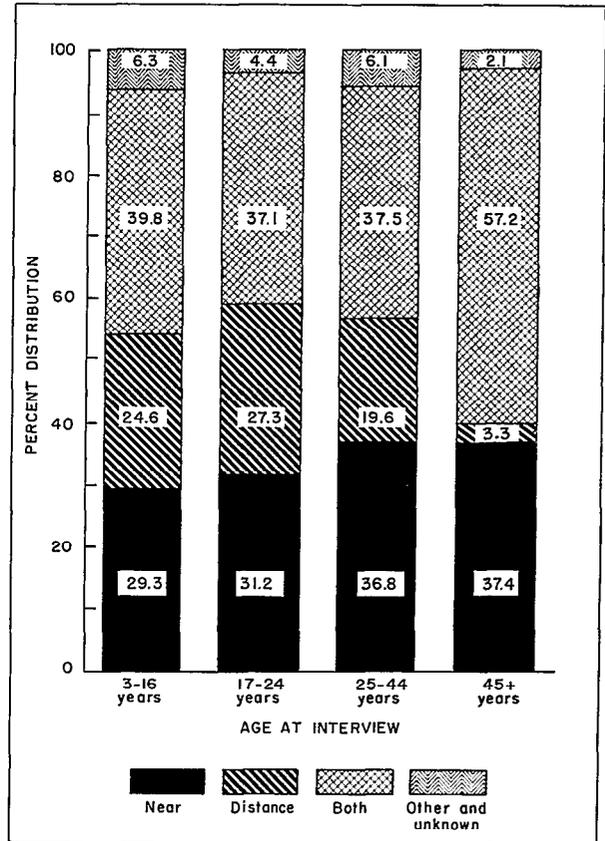


Figure 5. Percent distribution of persons with corrective lenses, by type of prescription according to age at the time of interview.

temporary or minor conditions. (As the proportion who used their corrective lenses for both near and distance vision increased, so did the frequency of usage.)

There was little variation in the proportion of the population by age groups having corrective lenses prescriptions for better distance vision, with the proportion ranging from 57.1 percent of those 25-44 years of age to 64.4 percent among those 3-16 years of age (fig. 5). However, there was a direct relationship between advancing age and the proportion with prescriptions for the correction of near vision, with the largest increase between those 25-44 years and those 45 years and over. Approximately 71.6 percent of the persons with corrective lenses under 45 years of age wore them for the correction of near vision com-

pared with 94.6 percent of those 45 years and over.

The estimates shown in table 14 indicate that a slightly higher proportion of females 3 years and over with corrective lenses had prescriptions for the correction of both near and distance vision (50.4 percent) than did males (47.2 percent). However, the proportion of males with prescriptions to improve near vision only (37.7 percent) was higher than that for females (34.4 percent). The proportion having correction for distance vision only was about the same for males and females.

Little difference existed for prescriptions for correction of both near and distance vision between the proportion of the white population 3 years and over with corrective lenses (49.1 per-

cent) and the nonwhite population (48.2 percent) (table 15). However, when correction for near vision only and for distance vision only is compared for the two color groups, a higher proportion of the nonwhite population needed correction for near vision and a higher proportion of the white needed correction for distance vision.

Approximately 56.8 percent of the persons 3 years and over with corrective lenses in families with annual incomes under \$5,000 had prescriptions for both near and distance vision compared with 44.3 percent of those persons in families

with higher annual incomes (table 16). However, the proportions of persons with prescriptions for correction of near vision only and for distance vision only were greater for persons in the higher family income group. The high proportion of those in the lower income group needing both types of correction is attributable to the concentration in this income level of older persons, the segment of the population most often needing bifocal lenses.

A larger proportion of the population 17 years and over in the labor force with corrective

Table D. Percent distribution of persons with corrective lenses, by frequency of use according to selected population characteristics: United States, July 1965-June 1966

Characteristic	Frequency of use					
	Total	All of the time	Most of the time	Hardly ever	Never	Un-known
	Percent distribution					
All persons-----	100.0	69.5	19.2	9.0	2.1	0.2
<u>Age</u>						
3-16 years-----	100.0	61.7	25.4	10.0	2.7	0.2
17-24 years-----	100.0	54.1	24.3	16.9	4.4	0.3
25-44 years-----	100.0	57.9	21.9	15.6	4.3	0.3
45 years and over-----	100.0	78.1	16.2	4.8	0.7	0.2
<u>Sex</u>						
Male-----	100.0	70.3	19.1	8.4	2.0	0.2
Female-----	100.0	68.8	19.3	9.5	2.2	0.2
<u>Color</u>						
White-----	100.0	70.2	18.7	8.8	2.0	0.3
Nonwhite-----	100.0	60.0	25.4	11.0	3.3	0.3
<u>Family income</u>						
Under \$5,000-----	100.0	73.5	16.5	7.7	2.1	0.2
\$5,000 and over-----	100.0	67.0	20.9	9.8	2.1	0.2
<u>Occupation (17+ years)</u>						
White collar-----	100.0	68.3	20.2	9.6	1.7	0.2
Blue collar-----	100.0	69.1	19.7	8.7	2.3	0.2
Service-----	100.0	69.3	19.0	9.4	2.0	0.3
Farm-----	100.0	74.8	16.0	7.3	*	*

lenses whose occupation was classified as service worker had corrective lenses for both near and distance (50.8 percent) than did persons in the other general occupational categories shown in table 17. Approximately 44.4 percent of white-collar workers, 43.8 percent of blue-collar workers, and 48.9 percent of farm workers had prescriptions for the correction of both near and distance vision. The occupational category with the highest proportion of prescriptions for the correction of near vision only was the blue-collar group (42.5 percent), but there was very little difference among this category and the remaining occupational categories. The category with the highest rate of correction for distance vision only was the white-collar category (12.9 percent), with again relatively little difference among the occupational categories.

Of all persons who had corrective lenses, 69.5 percent used them all the time; 19.2 percent, most of the time; 9.0 percent, hardly ever; and 2.1 percent, never (table D). The increasing need for correction with advancing age is indicated by the high percentage (78.1) of persons 45 years and older who wore their corrective lenses all the time. The influence of age is reflected in the differences in frequency of use by other population characteristics shown in table D. In the white population, which is comparatively older than the nonwhite, lenses were used all of the time by 70.2 percent of those with lenses compared with 60.0 percent of the nonwhite population. The percentage using lenses all of the time was also high among persons living in families with incomes of less than \$5,000 and among those whose occupation was farming, two population groups including a high proportion of older people.

## SOURCE OF OPTICAL PRESCRIPTION

Although 86,020,000 persons 3 years or older had corrective lenses of some type during the survey year, July 1965-June 1966, only 49,267,000 or 57.3 percent had obtained their present lenses during the 2-year period preceding the interview date (table 18). Included in this estimate were those persons who during the 2-year period had purchased or obtained lenses for the purpose of improving their vision. Persons who had only frames repaired or broken lenses replaced, who

obtained new lenses with an "old" prescription (obtained more than 2 years before the interview), and who obtained nonprescription sunglasses or safety glasses were excluded.

Of the 49,267,000 persons who obtained corrective lenses during the 2-year period, approximately 98.6 percent had an optical examination for the fitting of lenses, and 1.4 percent were not examined. This latter estimate was derived from responses by sample persons that lenses had been obtained at a department store or similar place, or at an optical store (without examination). It is possible that some of the sample persons may have mistakenly reported glasses obtained on an "old" prescription as glasses obtained without examination; in such cases, they would be improperly classified as obtaining glasses in the past 2 years without examination.

Of the 48,562,000 persons who had some type of optical examination for the lenses they had obtained in the past 2 years, 33.4 percent were, on the basis of reported data, examined by an ophthalmologist compared with 56.7 percent whose examination was performed by an optometrist. For about 8.9 percent no information was available about the source of the examination; the remainder, consisting of about 1 percent, were examined by opticians, personnel in optical stores, at clinics, and by medical doctors other than ophthalmologists. It should be pointed out that only persons who had obtained lenses during the 2-year period prior to the interview were asked about the source of their optical examination. Therefore, persons who may have had eye examinations, but for whom no correction (or no change in lenses) was prescribed, are not included in the above estimates.

## Verification of Source

During the first half of the data-collection year, July-December 1965, an attempt was made to evaluate the accuracy of information pertaining to the source of prescription for lenses reported by the respondent during the interview. The interviewer was instructed to verify the identification of the person performing the optical examination as soon as possible after the interview as an ophthalmologist, optometrist, or "other" (as described by the respondent). The

Table E. Results of the study of accuracy of reporting the source of optical prescriptions, by household respondents: United States, July 1965-June 1966

Verification by interviewer	Source of prescription as reported by household respondent	
	Ophthalmologist	Optometrist
Total-----	100.0	100.0
Ophthalmologist-----	45.5	1.3
Physician, not an ophthalmologist-----	1.4	0.1
Physician, specialty unknown-----	15.0	0.9
Name identified with medical clinic-----	7.2	2.4
Optometrist-----	5.0	55.6
Unknown if physician or optometrist-----	1.1	0.8
Name identified with optical company-----	1.2	18.3
Not identifiable <sup>1</sup> -----	23.6	20.6

<sup>1</sup>Name not reported by respondent or not listed in the directory.

local telephone directory was used in this identification, and due to variations in listing physicians, medical specialists, and practitioners, it was not always possible to confirm the respondent's reply. The results of the verification of ophthalmologists and optometrists reported in the interview are indicative of the completeness with which the verification was accomplished and give some estimate of the accuracy with which household respondents can report information of this kind (table E).

The incompleteness of the verification process makes it difficult to evaluate the reliability of the responses on source of prescription (table E). However, it would seem on the basis of these data that the respondents' inability to distinguish between ophthalmologists and optometrists is not a major reporting problem.

#### Person Characteristics

The percent of persons examined by an ophthalmologist was higher among those whose residence was in a metropolitan area (36.7 percent) than among persons residing outside metropolitan areas (27.2 percent) (table 19). This difference is due to some extent to the fact that as medical specialists usually practice in metropolitan areas their services would not be as readily available to persons in outlying areas.

The proportion of the population utilizing the services of medical specialists is closely related to the amount of family income (*Vital and Health Statistics*, Series 10, No. 28). This relationship is emphasized by the fact that approximately 36.9 percent of persons who were examined for lenses in the past 2 years in the higher family income group (\$5,000 and over) had received a recent eye examination from an ophthalmologist compared with 25.9 percent in the lower family income group (table 19).

A population characteristic that is even more indicative of the use of specialists' services is the educational level of the head of the family. About one-half of the persons examined for lenses who were members of a family in which the head had completed 13 or more years of school received an eye examination from an ophthalmologist compared with less than one-third of the persons in family units the head of which had received less education.



## DETAILED TABLES

### TYPE OF LENS

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### AGE WHEN FIRST OBTAINED CORRECTIVE LENSES

	<ol style="list-style-type: none"> <li>10. Number and percent distribution of persons 3 years of age and over with corrective lenses, by age when first obtained corrective lenses according to sex and age at time of interview: United States, July 1965-June 1966-----</li> <li>11. Number and percent distribution of persons 3 years of age and over with corrective lenses, by age when first obtained corrective lenses according to color and age at time of interview: United States, July 1965-June 1966-----</li> <li>12. Number and percent distribution of persons 3 years of age and over with corrective lenses, by age when first obtained corrective lenses according to family income and age at time of interview: United States, July 1965-June 1966-----</li> </ol>	<p>27</p> <p>28</p> <p>29</p>
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DETAILED TABLES--Con.

TYPE OF PRESCRIPTION

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SOURCE OF PRESCRIPTION

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Table 1. Number and percent distribution of persons 3 years of age and over with or without corrective lenses, by type of lens according to sex and age: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Sex and age	Persons 3 years and over <sup>1</sup>	No corrective lenses	With corrective lenses		
			Total	Eye-glasses only	Contact lenses with or without eyeglasses
<u>Both sexes</u>					
Number of persons in thousands					
All ages, 3 years and over-----	178,907	92,693	86,020	84,247	1,773
3-16 years-----	55,037	46,652	8,263	8,110	153
17-24 years-----	22,393	13,049	9,310	8,474	835
25-44 years-----	45,185	26,250	18,914	18,314	599
45 years and over-----	56,292	6,743	49,533	49,348	185
45-54 years-----	21,850	4,112	17,732	17,636	97
55-64 years-----	16,864	1,337	15,526	15,469	57
65 years and over-----	17,578	1,294	16,275	16,244	*
<u>Male</u>					
All ages, 3 years and over-----	86,195	49,201	36,880	36,349	530
3-16 years-----	27,865	24,162	3,632	3,600	*
17-24 years-----	10,461	6,917	3,523	3,311	212
25-44 years-----	21,581	13,928	7,637	7,434	203
45 years and over-----	26,288	4,193	22,088	22,004	83
45-54 years-----	10,554	2,571	7,982	7,945	*
55-64 years-----	8,043	861	7,180	7,153	*
65 years and over-----	7,691	761	6,925	6,906	*
<u>Female</u>					
All ages, 3 years and over-----	92,712	43,493	49,140	47,898	1,242
3-16 years-----	27,172	22,489	4,630	4,510	120
17-24 years-----	11,932	6,132	5,787	5,163	624
25-44 years-----	23,605	12,322	11,277	10,880	397
45 years and over-----	30,003	2,549	27,446	27,344	102
45-54 years-----	11,295	1,541	9,750	9,691	59
55-64 years-----	8,821	475	8,346	8,315	*
65 years and over-----	9,887	533	9,350	9,337	*

See footnote at end of table.

Table 1. Number and percent distribution of persons 3 years of age and over with or without corrective lenses, by type of lens according to sex and age: United States, July 1965-June 1966—Con.

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Sex and age	Persons 3 years and over <sup>1</sup>	No corrective lenses	With corrective lenses		
			Total	Eye- glasses only	Contact lenses with or without eyeglasses
<u>Both sexes</u>		Percent distribution			
All ages, 3 years and over-----	100.0	51.8	48.1	47.1	1.0
3-16 years-----	100.0	84.8	15.0	14.7	0.3
17-24 years-----	100.0	58.3	41.6	37.8	3.7
25-44 years-----	100.0	58.1	41.9	40.5	1.3
45 years and over-----	100.0	12.0	88.0	87.7	0.3
45-54 years-----	100.0	18.8	81.2	80.7	0.4
55-64 years-----	100.0	7.9	92.1	91.7	0.3
65 years and over-----	100.0	7.4	92.6	92.4	*
<u>Male</u>					
All ages, 3 years and over-----	100.0	57.1	42.8	42.2	0.6
3-16 years-----	100.0	86.7	13.0	12.9	*
17-24 years-----	100.0	66.1	33.7	31.7	2.0
25-44 years-----	100.0	64.5	35.4	34.4	0.9
45 years and over-----	100.0	16.0	84.0	83.7	0.3
45-54 years-----	100.0	24.4	75.6	75.3	*
55-64 years-----	100.0	10.7	89.3	88.9	*
65 years and over-----	100.0	9.9	90.0	89.8	*
<u>Female</u>					
All ages, 3 years and over-----	100.0	46.9	53.0	51.7	1.3
3-16 years-----	100.0	82.8	17.0	16.6	0.4
17-24 years-----	100.0	51.4	48.5	43.3	5.2
25-44 years-----	100.0	52.2	47.8	46.1	1.7
45 years and over-----	100.0	8.5	91.5	91.1	0.3
45-54 years-----	100.0	13.6	86.3	85.8	0.5
55-64 years-----	100.0	5.4	94.6	94.3	*
65 years and over-----	100.0	5.4	94.6	94.4	*

<sup>1</sup>Includes persons for whom no information on corrective lenses was available.

Table 2. Number of persons 3 years of age and over with or without corrective lenses, by type of lens, geographic region, and age: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Region and age	Persons 3 years and over <sup>1</sup>	No corrective lenses	With corrective lenses		
			Total	Eye-glasses only	Contact lenses with or without eyeglasses
<u>All regions</u>					
Number of persons in thousands					
All ages, 3 years and over-----	178,907	92,693	86,020	84,247	1,773
3-16 years-----	55,037	46,652	8,263	8,110	153
17-24 years-----	22,393	13,049	9,310	8,474	835
25-44 years-----	45,185	26,250	18,914	18,314	599
45 years and over-----	56,292	6,743	49,533	49,348	185
<u>Northeast</u>					
All ages, 3 years and over-----	44,762	21,234	23,493	23,108	386
3-16 years-----	12,703	10,496	2,194	2,174	*
17-24 years-----	5,266	2,769	2,486	2,305	180
25-44 years-----	11,466	6,363	5,096	4,963	134
45 years and over-----	15,327	1,607	13,717	13,666	51
<u>North Central</u>					
All ages, 3 years and over-----	49,947	24,614	25,291	24,843	448
3-16 years-----	15,401	12,583	2,784	2,746	*
17-24 years-----	6,235	3,407	2,823	2,575	247
25-44 years-----	12,309	6,943	5,364	5,227	138
45 years and over-----	16,002	1,681	14,320	14,296	*
<u>South</u>					
All ages, 3 years and over-----	55,027	31,452	23,530	22,986	543
3-16 years-----	17,798	15,759	2,017	1,956	61
17-24 years-----	7,247	4,731	2,505	2,256	250
25-44 years-----	13,749	8,551	5,189	5,014	176
45 years and over-----	16,233	2,411	13,818	13,761	57
<u>West</u>					
All ages, 3 years and over-----	29,171	15,392	13,706	13,310	396
3-16 years-----	9,134	7,814	1,268	1,234	*
17-24 years-----	3,645	2,142	1,496	1,338	158
25-44 years-----	7,661	4,392	3,264	3,112	153
45 years and over-----	8,730	1,044	7,678	7,626	52

<sup>1</sup>Includes persons for whom no information on corrective lenses was available.

Table 3. Percent distribution of persons 3 years of age and over with or without corrective lenses, by type of lens according to geographic region and age: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Region and age	Persons 3 years and over <sup>1</sup>	No corrective lenses	With corrective lenses		
			Total	Eye-glasses only	Contact lenses with or without eyeglasses
<u>All regions</u>		Percent distribution			
All ages, 3 years and over-----	100.0	51.8	48.1	47.1	1.0
3-16 years-----	100.0	84.8	15.0	14.7	0.3
17-24 years-----	100.0	58.3	41.6	37.8	3.7
25-44 years-----	100.0	58.1	41.9	40.5	1.3
45 years and over-----	100.0	12.0	88.0	87.7	0.3
<u>Northeast</u>					
All ages, 3 years and over-----	100.0	47.4	52.5	51.6	0.9
3-16 years-----	100.0	82.6	17.3	17.1	*
17-24 years-----	100.0	52.6	47.2	43.8	3.4
25-44 years-----	100.0	55.5	44.4	43.3	1.2
45 years and over-----	100.0	10.5	89.5	89.2	0.3
<u>North Central</u>					
All ages, 3 years and over-----	100.0	49.3	50.6	49.7	0.9
3-16 years-----	100.0	81.7	18.1	17.8	*
17-24 years-----	100.0	54.6	45.3	41.3	4.0
25-44 years-----	100.0	56.4	43.6	42.5	1.1
45 years and over-----	100.0	10.5	89.5	89.3	*
<u>South</u>					
All ages, 3 years and over-----	100.0	57.2	42.8	41.8	1.0
3-16 years-----	100.0	88.5	11.3	11.0	0.3
17-24 years-----	100.0	65.3	34.6	31.1	3.4
25-44 years-----	100.0	62.2	37.7	36.5	1.3
45 years and over-----	100.0	14.9	85.1	84.8	0.4
<u>West</u>					
All ages, 3 years and over-----	100.0	52.8	47.0	45.6	1.4
3-16 years-----	100.0	85.5	13.9	13.5	*
17-24 years-----	100.0	58.8	41.0	36.7	4.3
25-44 years-----	100.0	57.3	42.6	40.6	2.0
45 years and over-----	100.0	12.0	87.9	87.4	0.6

<sup>1</sup>Includes persons for whom no information on corrective lenses was available.

Table 4. Number and percent distribution of persons 3 years of age and over with or without corrective lenses, by type of lens according to residence and age: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Residence and age	Persons 3 years and over <sup>1</sup>	No corrective lenses	With corrective lenses		
			Total	Eye- glasses only	Contact lenses with or without eyeglasses
<u>All areas</u>					
Number of persons in thousands					
All ages, 3 years and over-----	178,907	92,693	86,020	84,247	1,773
3-16 years-----	55,037	46,652	8,263	8,110	153
17-24 years-----	22,393	13,049	9,310	8,474	835
25-44 years-----	45,185	26,250	18,914	18,314	599
45 years and over-----	56,292	6,743	49,533	49,348	185
<u>All SMSA's</u>					
All ages, 3 years and over-----	114,489	58,638	55,735	54,410	1,325
3-16 years-----	34,596	29,183	5,339	5,221	118
17-24 years-----	14,460	8,219	6,218	5,600	618
25-44 years-----	30,109	17,267	12,833	12,373	460
45 years and over-----	35,324	3,970	31,344	31,216	128
<u>Outside SMSA's</u>					
All ages, 3 years and over-----	64,418	34,055	30,284	29,837	448
3-16 years-----	20,441	17,469	2,923	2,889	*
17-24 years-----	7,933	4,829	3,091	2,874	217
25-44 years-----	15,076	8,983	6,081	5,941	140
45 years and over-----	20,968	2,773	18,189	18,132	57
<u>All areas</u>					
Percent distribution					
All ages, 3 years and over-----	100.0	51.8	48.1	47.1	1.0
3-16 years-----	100.0	84.8	15.0	14.7	0.3
17-24 years-----	100.0	58.3	41.6	37.8	3.7
25-44 years-----	100.0	58.1	41.9	40.5	1.3
45 years and over-----	100.0	12.0	88.0	87.7	0.3
<u>All SMSA's</u>					
All ages, 3 years and over-----	100.0	51.2	48.7	47.5	1.2
3-16 years-----	100.0	84.4	15.4	15.1	0.3
17-24 years-----	100.0	56.8	43.0	38.7	4.3
25-44 years-----	100.0	57.3	42.6	41.1	1.5
45 years and over-----	100.0	11.2	88.7	88.4	0.4
<u>Outside SMSA's</u>					
All ages, 3 years and over-----	100.0	52.9	47.0	46.3	0.7
3-16 years-----	100.0	85.5	14.3	14.1	*
17-24 years-----	100.0	60.9	39.0	36.2	2.7
25-44 years-----	100.0	59.6	40.3	39.4	0.9
45 years and over-----	100.0	13.2	86.7	86.5	0.3

<sup>1</sup>Includes persons for whom no information on corrective lenses was available.

Table 5. Number and percent distribution of persons 3 years of age and over with or without corrective lenses, by type of lens according to color and age: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Color and age	Persons 3 years and over <sup>1</sup>	No corrective lenses	With corrective lenses		
			Total	Eye- glasses only	Contact lenses with or without eyeglasses
<u>Total</u>					
Number of persons in thousands					
All ages, 3 years and over-----	178,907	92,693	86,020	84,247	1,773
3-16 years-----	55,037	46,652	8,263	8,110	153
17-24 years-----	22,393	13,049	9,310	8,474	835
25-44 years-----	45,185	26,250	18,914	18,314	599
45 years and over-----	56,292	6,743	49,533	49,348	185
<u>White</u>					
All ages, 3 years and over-----	158,056	78,287	79,611	77,879	1,732
3-16 years-----	47,087	39,460	7,529	7,380	149
17-24 years-----	19,657	11,013	8,615	7,798	817
25-44 years-----	40,065	22,640	17,411	16,822	589
45 years and over-----	51,246	5,175	46,057	45,879	178
<u>Nonwhite</u>					
All ages, 3 years and over-----	20,852	14,406	6,408	6,368	*
3-16 years-----	7,950	7,192	734	730	*
17-24 years-----	2,736	2,036	695	676	*
25-44 years-----	5,120	3,610	1,503	1,492	*
45 years and over-----	5,045	1,567	3,476	3,469	*
<u>Total</u>					
Percent distribution					
All ages, 3 years and over-----	100.0	51.8	48.1	47.1	1.0
3-16 years-----	100.0	84.8	15.0	14.7	0.3
17-24 years-----	100.0	58.3	41.6	37.8	3.7
25-44 years-----	100.0	58.1	41.9	40.5	1.3
45 years and over-----	100.0	12.0	88.0	87.7	0.3
<u>White</u>					
All ages, 3 years and over-----	100.0	49.5	50.4	49.3	1.1
3-16 years-----	100.0	83.8	16.0	15.7	0.3
17-24 years-----	100.0	56.0	43.8	39.7	4.2
25-44 years-----	100.0	56.5	43.5	42.0	1.5
45 years and over-----	100.0	10.1	89.9	89.5	0.3
<u>Nonwhite</u>					
All ages, 3 years and over-----	100.0	69.1	30.7	30.5	*
3-16 years-----	100.0	90.5	9.2	9.2	*
17-24 years-----	100.0	74.4	25.4	24.7	*
25-44 years-----	100.0	70.5	29.4	29.1	*
45 years and over-----	100.0	31.1	68.9	68.8	*

<sup>1</sup>Includes persons for whom no information on corrective lenses was available.

Table 6. Number and percent distribution of persons 3 years of age and over with or without corrective lenses, by type of lens according to family income and age: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Family income and age	Persons 3 years and over <sup>1</sup>	No corrective lenses	With corrective lenses		
			Total	Eye-glasses only	Contact lenses with or without eyeglasses
<u>All incomes<sup>2</sup></u>					
Number of persons in thousands					
All ages, 3 years and over-----	178,907	92,693	86,020	84,247	1,773
3-16 years-----	55,037	46,652	8,263	8,110	153
17-24 years-----	22,393	13,049	9,310	8,474	835
25-44 years-----	45,185	26,250	18,914	18,314	599
45 years and over-----	56,292	6,743	49,533	49,348	185
<u>Under \$5,000</u>					
All ages, 3 years and over-----	59,504	29,874	29,572	29,153	418
3-16 years-----	16,011	14,198	1,778	1,760	*
17-24 years-----	8,379	5,222	3,146	2,854	292
25-44 years-----	10,824	7,166	3,652	3,585	67
45 years and over-----	24,289	3,288	20,996	20,954	*
<u>\$5,000 and over</u>					
All ages, 3 years and over-----	112,043	59,602	52,320	51,007	1,313
3-16 years-----	37,313	31,015	6,215	6,083	132
17-24 years-----	13,241	7,357	5,863	5,336	527
25-44 years-----	32,881	18,188	14,684	14,159	525
45 years and over-----	28,607	3,043	25,558	25,429	129
<u>All incomes<sup>2</sup></u>					
Percent distribution					
All ages, 3 years and over-----	100.0	51.8	48.1	47.1	1.0
3-16 years-----	100.0	84.8	15.0	14.7	0.3
17-24 years-----	100.0	58.3	41.6	37.8	3.7
25-44 years-----	100.0	58.1	41.9	40.5	1.3
45 years and over-----	100.0	12.0	88.0	87.7	0.3
<u>Under \$5,000</u>					
All ages, 3 years and over-----	100.0	50.2	49.7	49.0	0.7
3-16 years-----	100.0	88.7	11.1	11.0	*
17-24 years-----	100.0	62.3	37.5	34.1	3.5
25-44 years-----	100.0	66.2	33.7	33.1	0.6
45 years and over-----	100.0	13.5	86.4	86.3	*
<u>\$5,000 and over</u>					
All ages, 3 years and over-----	100.0	53.2	46.7	45.5	1.2
3-16 years-----	100.0	83.1	16.7	16.3	0.4
17-24 years-----	100.0	55.6	44.3	40.3	4.0
25-44 years-----	100.0	55.3	44.7	43.1	1.6
45 years and over-----	100.0	10.6	89.3	88.9	0.5

<sup>1</sup>Includes persons for whom no information on corrective lenses was available.

<sup>2</sup>Includes persons of unknown family income.

Table 7. Number and percent distribution of persons 3 years of age and over with or without corrective lenses, by type of lens according to education of head of family and age: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Education of head of family and age	Persons 3 years and over <sup>1</sup>	No corrective lenses	With corrective lenses		
			Total	Eye-glasses only	Contact lenses with or without eyeglasses
<u>All educational groups<sup>2</sup></u>		Number of persons in thousands			
All ages, 3 years and over-----	178,907	92,693	86,020	84,247	1,773
3-16 years-----	55,037	46,652	8,263	8,110	153
17-24 years-----	22,393	13,049	9,310	8,474	835
25-44 years-----	45,185	26,250	18,914	18,314	599
45 years and over-----	56,292	6,743	49,533	49,348	185
<u>12 years or less</u>					
All ages, 3 years and over-----	138,142	72,787	65,213	64,379	834
3-16 years-----	42,401	36,223	6,093	6,028	66
17-24 years-----	16,991	10,548	6,414	6,028	387
25-44 years-----	32,870	20,212	12,640	12,374	265
45 years and over-----	45,880	5,804	40,065	39,949	116
<u>13 years and over</u>					
All ages, 3 years and over-----	37,772	18,436	19,290	18,362	928
3-16 years-----	11,881	9,780	2,065	1,981	84
17-24 years-----	5,117	2,311	2,800	2,356	444
25-44 years-----	11,771	5,652	6,117	5,785	333
45 years and over-----	9,003	692	8,308	8,240	68
<u>All educational groups<sup>2</sup></u>		Percent distribution			
All ages, 3 years and over-----	100.0	51.8	48.1	47.1	1.0
3-16 years-----	100.0	84.8	15.0	14.7	0.3
17-24 years-----	100.0	58.3	41.6	37.8	3.7
25-44 years-----	100.0	58.1	41.9	40.5	1.3
45 years and over-----	100.0	12.0	88.0	87.7	0.3
<u>12 years or less</u>					
All ages, 3 years and over-----	100.0	52.7	47.2	46.6	0.6
3-16 years-----	100.0	85.4	14.4	14.2	0.2
17-24 years-----	100.0	62.1	37.7	35.5	2.3
25-44 years-----	100.0	61.5	38.5	37.6	0.8
45 years and over-----	100.0	12.7	87.3	87.1	0.3
<u>13 years and over</u>					
All ages, 3 years and over-----	100.0	48.8	51.1	48.6	2.5
3-16 years-----	100.0	82.3	17.4	16.7	0.7
17-24 years-----	100.0	45.2	54.7	46.0	8.7
25-44 years-----	100.0	48.0	52.0	49.1	2.8
45 years and over-----	100.0	7.7	92.3	91.5	0.8

<sup>1</sup>Includes persons for whom no information on corrective lenses was available.

<sup>2</sup>Includes persons of unknown education.

Table 8. Number of persons 17 years of age and over in the labor force with or without corrective lenses, by type of lens, occupation, and age: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Occupation and age	Persons 17 years and over <sup>1</sup>	No corrective lenses	With corrective lenses		
			Total	Eye-glasses only	Contact lenses with or without eyeglasses
Number of persons in thousands					
<u>All occupations</u> <sup>2</sup>					
All ages, 17 years and over-----	76,475	31,420	45,010	43,951	1,059
17-24 years-----	14,558	8,614	5,924	5,398	526
25-44 years-----	31,503	18,615	12,871	12,461	409
45 years and over-----	30,414	4,191	26,215	26,092	124
<u>White-collar workers</u>					
All ages, 17 years and over-----	34,296	10,911	23,371	22,547	824
17-24 years-----	6,265	2,895	3,365	2,960	405
25-44 years-----	14,585	6,925	7,655	7,326	329
45 years and over-----	13,445	1,091	12,351	12,261	90
<u>Professional</u>					
All ages, 17 years and over-----	10,058	3,098	6,956	6,642	314
17-24 years-----	1,624	694	927	795	132
25-44 years-----	4,991	2,151	2,840	2,686	154
45 years and over-----	3,443	253	3,188	3,160	*
<u>Managers</u>					
All ages, 17 years and over-----	7,735	2,378	5,355	5,270	85
17-24 years-----	359	212	146	134	*
25-44 years-----	3,236	1,793	1,443	1,407	*
45 years and over-----	4,140	373	3,766	3,729	*
<u>Clerical</u>					
All ages, 17 years and over-----	11,830	3,847	7,976	7,642	333
17-24 years-----	3,403	1,507	1,893	1,678	214
25-44 years-----	4,637	2,032	2,602	2,495	106
45 years and over-----	3,790	308	3,481	3,469	*

See footnotes at end of table.

Table 8. Number of persons 17 years of age and over in the labor force with or without corrective lenses, by type of lens, occupation, and age: United States, July 1965-June 1966—Con.

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Occupation and age	Persons 17 years and over <sup>1</sup>	No corrective lenses	With corrective lenses		
			Total	Eye-glasses only	Contact lenses with or without eyeglasses
<u>Sales</u>					
Number of persons in thousands					
All ages, 17 years and over-----	4,673	1,588	3,084	2,993	91
17-24 years-----	880	481	398	352	*
25-44 years-----	1,721	949	770	738	*
45 years and over-----	2,073	157	1,915	1,903	*
<u>Blue-collar workers</u>					
All ages, 17 years and over-----	28,060	14,342	13,697	13,580	117
17-24 years-----	5,181	3,716	1,453	1,413	*
25-44 years-----	12,316	8,660	3,649	3,590	59
45 years and over-----	10,563	1,966	8,595	8,577	*
<u>Service workers</u>					
All ages, 17 years and over-----	9,548	3,884	5,655	5,563	92
17-24 years-----	1,990	1,208	779	714	65
25-44 years-----	3,323	2,095	1,223	1,205	*
45 years and over-----	4,235	581	3,653	3,645	*
<u>Farm workers</u>					
All ages, 17 years and over-----	3,629	1,762	1,866	1,857	*
17-24 years-----	567	449	118	118	*
25-44 years-----	1,081	803	278	275	*
45 years and over-----	1,980	510	1,469	1,463	*

<sup>1</sup>Includes persons for whom no information on corrective lenses was available.

<sup>2</sup>Includes persons of unknown occupation.

Table 9. Percent distribution of persons 17 years of age and over in the labor force with or without corrective lenses, by type of lens according to occupation and age: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Occupation and age	Persons 17 years and over <sup>1</sup>	No corrective lenses	With corrective lenses		
			Total	Eye- glasses only	Contact lenses with or without eyeglasses
<u>All occupations<sup>2</sup></u>		Percent distribution			
All ages, 17 years and over-----	100.0	41.1	58.9	57.5	1.4
17-24 years-----	100.0	59.2	40.7	37.1	3.6
25-44 years-----	100.0	59.1	40.9	39.6	1.3
45 years and over-----	100.0	13.8	86.2	85.8	0.4
<u>White-collar workers</u>					
All ages, 17 years and over-----	100.0	31.8	68.1	65.7	2.4
17-24 years-----	100.0	46.2	53.7	47.2	6.5
25-44 years-----	100.0	47.5	52.5	50.2	2.3
45 years and over-----	100.0	8.1	91.9	91.2	0.7
<u>Professional</u>					
All ages, 17 years and over-----	100.0	30.8	69.2	66.0	3.1
17-24 years-----	100.0	42.7	57.1	49.0	8.1
25-44 years-----	100.0	43.1	56.9	53.8	3.1
45 years and over-----	100.0	7.3	92.6	91.8	*
<u>Managers</u>					
All ages, 17 years and over-----	100.0	30.7	69.2	68.1	1.1
17-24 years-----	100.0	59.1	40.7	37.3	*
25-44 years-----	100.0	55.4	44.6	43.5	*
45 years and over-----	100.0	9.0	91.0	90.1	*
<u>Clerical</u>					
All ages, 17 years and over-----	100.0	32.5	67.4	64.6	2.8
17-24 years-----	100.0	44.3	55.6	49.3	6.3
25-44 years-----	100.0	43.8	56.1	53.8	2.3
45 years and over-----	100.0	8.1	91.8	91.5	*

See footnotes at end of table.

Table 9. Percent distribution of persons 17 years of age and over in the labor force with or without corrective lenses, by type of lens according to occupation and age: United States, July 1965-June 1966--Con.

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Occupation and age	Persons 17 years and over <sup>1</sup>	No corrective lenses	With corrective lenses		
			Total	Eye-glasses only	Contact lenses with or without eyeglasses
<u>Sales</u>		Percent distribution			
All ages, 17 years and over-----	100.0	34.0	66.0	64.0	1.9
17-24 years-----	100.0	54.7	45.2	40.0	*
25-44 years-----	100.0	55.1	44.7	42.9	*
45 years and over-----	100.0	7.6	92.4	91.8	*
<u>Blue-collar workers</u>					
All ages, 17 years and over-----	100.0	51.1	48.8	48.4	0.4
17-24 years-----	100.0	71.7	28.0	27.3	*
25-44 years-----	100.0	70.3	29.6	29.1	0.5
45 years and over-----	100.0	18.6	81.4	81.2	*
<u>Service workers</u>					
All ages, 17 years and over-----	100.0	40.7	59.2	58.3	1.0
17-24 years-----	100.0	60.7	39.1	35.9	3.3
25-44 years-----	100.0	63.0	36.8	36.3	*
45 years and over-----	100.0	13.7	86.3	86.1	*
<u>Farm workers</u>					
All ages, 17 years and over-----	100.0	48.6	51.4	51.2	*
17-24 years-----	100.0	79.2	20.8	20.8	*
25-44 years-----	100.0	74.3	25.7	25.4	*
45 years and over-----	100.0	25.8	74.2	73.9	*

<sup>1</sup>Includes persons for whom no information on corrective lenses was available.

<sup>2</sup>Includes persons of unknown occupation.

Table 10. Number and percent distribution of persons 3 years of age and over with corrective lenses, by age when first obtained corrective lenses according to sex and age at time of interview: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II.]

Sex and age at time of interview	Persons 3 years and over at time of interview	Age when first obtained corrective lenses				
		Under 17 years	17-24 years	25-44 years	45 years and over	Unknown
<u>Both sexes</u>		Number of persons in thousands				
All ages, 3 years and over-----	86,020	...	...	...	...	...
3-16 years-----	8,263	8,263	...	...	...	...
17-24 years-----	9,310	6,533	2,531	...	...	245
25-44 years-----	18,914	6,778	4,654	6,571	...	911
45 years and over-----	49,533	4,400	4,021	15,550	22,592	2,971
<u>Male</u>						
All ages, 3 years and over-----	36,880	...	...	...	...	...
3-16 years-----	3,632	3,632	...	...	...	...
17-24 years-----	3,523	2,437	953	...	...	133
25-44 years-----	7,637	2,112	1,798	3,137	...	590
45 years and over-----	22,088	1,333	1,292	5,964	11,944	1,555
<u>Female</u>						
All ages, 3 years and over-----	49,140	...	...	...	...	...
3-16 years-----	4,630	4,630	...	...	...	...
17-24 years-----	5,787	4,096	1,578	...	...	113
25-44 years-----	11,277	4,665	2,856	3,434	...	321
45 years and over-----	27,446	3,067	2,729	9,586	10,649	1,415
<u>Both sexes</u>		Percent distribution				
All ages, 3 years and over-----	100.0	...	...	...	...	...
3-16 years-----	100.0	100.0	...	...	...	...
17-24 years-----	100.0	70.2	27.2	...	...	2.6
25-44 years-----	100.0	35.8	24.6	34.7	...	4.8
45 years and over-----	100.0	8.9	8.1	31.4	45.6	6.0
<u>Male</u>						
All ages, 3 years and over-----	100.0	...	...	...	...	...
3-16 years-----	100.0	100.0	...	...	...	...
17-24 years-----	100.0	69.2	27.1	...	...	3.8
25-44 years-----	100.0	27.7	23.5	41.1	...	7.7
45 years and over-----	100.0	6.0	5.8	27.0	54.1	7.0
<u>Female</u>						
All ages, 3 years and over-----	100.0	...	...	...	...	...
3-16 years-----	100.0	100.0	...	...	...	...
17-24 years-----	100.0	70.8	27.3	...	...	2.0
25-44 years-----	100.0	41.4	25.3	30.5	...	2.8
45 years and over-----	100.0	11.2	9.9	34.9	38.8	5.2

Table 11. Number and percent distribution of persons 3 years of age and over with corrective lenses, by age when first obtained corrective lenses according to color and age at time of interview: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Color and age at time of interview	Persons 3 years and over at time of interview	Age when first obtained corrective lenses				
		Under 17 years	17-24 years	25-44 years	45 years and over	Unknown
<u>Total</u>		Number of persons in thousands				
All ages, 3 years and over-----	86,020	...	...	...	...	...
3-16 years-----	8,263	8,263	...	...	...	...
17-24 years-----	9,310	6,533	2,531	...	...	245
25-44 years-----	18,914	6,778	4,654	6,571	...	911
45 years and over-----	49,533	4,400	4,021	15,550	22,592	2,971
<u>White</u>						
All ages, 3 years and over-----	79,611	...	...	...	...	...
3-16 years-----	7,529	7,529	...	...	...	...
17-24 years-----	8,615	6,159	2,248	...	...	207
25-44 years-----	17,411	6,430	4,270	5,914	...	797
45 years and over-----	46,057	4,180	3,839	14,556	20,892	2,590
<u>Nonwhite</u>						
All ages, 3 years and over-----	6,408	...	...	...	...	...
3-16 years-----	734	734	...	...	...	...
17-24 years-----	695	374	283	...	...	*
25-44 years-----	1,503	348	384	657	...	114
45 years and over-----	3,476	220	182	994	1,700	380
<u>Total</u>		Percent distribution				
All ages, 3 years and over-----	100.0	...	...	...	...	...
3-16 years-----	100.0	100.0	...	...	...	...
17-24 years-----	100.0	70.2	27.2	...	...	2.6
25-44 years-----	100.0	35.8	24.6	34.7	...	4.8
45 years and over-----	100.0	8.9	8.1	31.4	45.6	6.0
<u>White</u>						
All ages, 3 years and over-----	100.0	...	...	...	...	...
3-16 years-----	100.0	100.0	...	...	...	...
17-24 years-----	100.0	71.5	26.1	...	...	2.4
25-44 years-----	100.0	36.9	24.5	34.0	...	4.6
45 years and over-----	100.0	9.1	8.3	31.6	45.4	5.6
<u>Nonwhite</u>						
All ages, 3 years and over-----	100.0	...	...	...	...	...
3-16 years-----	100.0	100.0	...	...	...	...
17-24 years-----	100.0	53.8	40.7	...	...	*
25-44 years-----	100.0	23.2	25.5	43.7	...	7.6
45 years and over-----	100.0	6.3	5.2	28.6	48.9	10.9

Table 12. Number and percent distribution of persons 3 years of age and over with corrective lenses, by age when first obtained corrective lenses according to family income and age at time of interview: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Family income and age at time of interview	Persons 3 years and over at time of interview	Age when first obtained corrective lenses				
		Under 17 years	17-24 years	25-44 years	45 years and over	Unknown
<u>All incomes<sup>1</sup></u>		Number of persons in thousands				
All ages, 3 years and over-----	86,020	...	...	...	...	...
3-16 years-----	8,263	8,263	...	...	...	...
17-24 years-----	9,310	6,533	2,531	...	...	245
25-44 years-----	18,914	6,778	4,654	6,571	...	911
45 years and over-----	49,533	4,400	4,021	15,550	22,592	2,971
<u>Under \$5,000</u>						
All ages, 3 years and over-----	29,572	...	...	...	...	...
3-16 years-----	1,778	1,778	...	...	...	...
17-24 years-----	3,146	2,181	868	...	...	97
25-44 years-----	3,652	1,234	897	1,339	...	181
45 years and over-----	20,996	1,569	1,488	6,045	10,766	1,127
<u>\$5,000 and over</u>						
All ages, 3 years and over-----	52,320	...	...	...	...	...
3-16 years-----	6,215	6,215	...	...	...	...
17-24 years-----	5,863	4,147	1,591	...	...	125
25-44 years-----	14,684	5,376	3,632	5,024	...	653
45 years and over-----	25,558	2,618	2,318	8,733	10,560	1,330
<u>All incomes<sup>1</sup></u>		Percent distribution				
All persons, 3 years and over-----	100.0	...	...	...	...	...
3-16 years-----	100.0	100.0	...	...	...	...
17-24 years-----	100.0	70.2	27.2	...	...	2.6
25-44 years-----	100.0	35.8	24.6	34.7	...	4.8
45 years and over-----	100.0	8.9	8.1	31.4	45.6	6.0
<u>Under \$5,000</u>						
All persons, 3 years and over-----	100.0	...	...	...	...	...
3-16 years-----	100.0	100.0	...	...	...	...
17-24 years-----	100.0	69.3	27.6	...	...	3.1
25-44 years-----	100.0	33.8	24.6	36.7	...	5.0
45 years and over-----	100.0	7.5	7.1	28.8	51.3	5.4
<u>\$5,000 and over</u>						
All persons, 3 years and over-----	100.0	...	...	...	...	...
3-16 years-----	100.0	100.0	...	...	...	...
17-24 years-----	100.0	70.7	27.1	...	...	2.1
25-44 years-----	100.0	36.6	24.7	34.2	...	4.4
45 years and over-----	100.0	10.2	9.1	34.2	41.3	5.2

<sup>1</sup>Includes persons of unknown family income.

Table 13. Number and percent distribution of persons 3 years of age and over with corrective lenses, by type of prescription according to age and frequency of use: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Age and frequency of use	Persons 3 years and over with corrective lenses <sup>1</sup>	Corrective lenses prescribed for:			Persons 3 years and over with corrective lenses <sup>1</sup>	Corrective lenses prescribed for:		
		Near vision only	Distance vision only	Both		Near vision only	Distance vision only	Both
<u>All ages</u>	Number of persons in thousands				Percent distribution			
Total <sup>2</sup> -----	86,020	30,822	9,929	42,179	100.0	35.8	11.5	49.0
All of the time----	59,749	18,776	5,994	33,296	100.0	31.4	10.0	55.7
Most of the time---	16,516	6,845	2,496	6,611	100.0	41.4	15.1	40.0
Hardly ever-----	7,734	4,139	1,228	1,829	100.0	53.5	15.9	23.6
Never-----	1,815	1,004	197	373	100.0	55.3	10.9	20.6
<u>3-16 years</u>	Number of persons in thousands				Percent distribution			
Total <sup>2</sup> -----	8,263	2,423	2,035	3,290	100.0	29.3	24.6	39.8
All of the time----	5,101	1,100	1,185	2,503	100.0	21.6	23.2	49.1
Most of the time---	2,096	780	632	587	100.0	37.2	30.2	28.0
Hardly ever-----	826	434	180	151	100.0	52.5	21.8	18.3
Never-----	222	103	*	*	100.0	46.4	*	*
<u>17-24 years</u>	Number of persons in thousands				Percent distribution			
Total <sup>2</sup> -----	9,310	2,901	2,543	3,454	100.0	31.2	27.3	37.1
All of the time----	5,040	945	1,459	2,451	100.0	18.8	28.9	48.6
Most of the time---	2,258	878	642	660	100.0	38.9	28.4	29.2
Hardly ever-----	1,578	825	385	276	100.0	52.3	24.4	17.5
Never-----	409	250	55	63	100.0	61.1	13.4	15.4
<u>25-44 years</u>	Number of persons in thousands				Percent distribution			
Total <sup>2</sup> -----	18,914	6,954	3,709	7,101	100.0	36.8	19.6	37.5
All of the time----	10,945	2,797	2,300	5,318	100.0	25.6	21.0	48.6
Most of the time---	4,149	1,836	859	1,225	100.0	44.3	20.7	29.5
Hardly ever-----	2,947	1,795	465	437	100.0	60.9	15.8	14.8
Never-----	813	506	80	109	100.0	62.2	9.8	13.4
<u>45 years and over</u>	Number of persons in thousands				Percent distribution			
Total <sup>2</sup> -----	49,533	18,544	1,641	28,333	100.0	37.4	3.3	57.2
All of the time----	38,662	13,935	1,050	23,024	100.0	36.0	2.7	59.6
Most of the time---	8,013	3,351	362	4,139	100.0	41.8	4.5	51.7
Hardly ever-----	2,382	1,085	198	966	100.0	45.5	8.3	40.6
Never-----	371	145	*	154	100.0	39.1	*	41.5

<sup>1</sup>Includes persons with other and unknown type of prescription.

<sup>2</sup>Includes persons with unknown frequency of use.

Table 14. Number and percent distribution of persons 3 years of age and over with corrective lenses, by type of prescription according to sex and frequency of use: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Frequency of use	Persons 3 years and over with corrective lenses <sup>1</sup>	Corrective lenses prescribed for:			Persons 3 years and over with corrective lenses <sup>1</sup>	Corrective lenses prescribed for:		
		Near vision only	Distance vision only	Both		Near vision only	Distance vision only	Both
<u>Both sexes</u>	Number of persons in thousands				Percent distribution			
Total <sup>2</sup> -----	86,020	30,822	9,929	42,179	100.0	35.8	11.5	49.0
All of the time----	59,749	18,776	5,994	33,296	100.0	31.4	10.0	55.7
Most of the time---	16,516	6,845	2,496	6,611	100.0	41.4	15.1	40.0
Hardly ever-----	7,734	4,139	1,228	1,829	100.0	53.5	15.9	23.6
Never-----	1,815	1,004	197	373	100.0	55.3	10.9	20.6
<u>Male</u>								
Total <sup>2</sup> -----	36,880	13,896	4,045	17,389	100.0	37.7	11.0	47.2
All of the time----	25,932	8,620	2,551	13,885	100.0	33.2	9.8	53.5
Most of the time---	7,044	3,124	945	2,703	100.0	44.3	13.4	38.4
Hardly ever-----	3,086	1,721	461	642	100.0	55.8	14.9	20.8
Never-----	729	393	85	138	100.0	53.9	11.7	18.9
<u>Female</u>								
Total <sup>2</sup> -----	49,140	16,926	5,884	24,780	100.0	34.4	12.0	50.4
All of the time----	33,817	10,157	3,443	19,411	100.0	30.0	10.2	57.4
Most of the time---	9,473	3,721	1,550	3,909	100.0	39.3	16.4	41.3
Hardly ever-----	4,648	2,418	767	1,187	100.0	52.0	16.5	25.5
Never-----	1,087	611	112	235	100.0	56.2	10.3	21.6

<sup>1</sup>Includes persons with other and known type of prescription.

<sup>2</sup>Includes persons with unknown frequency of use.

Table 15. Number and percent distribution of persons 3 years of age and over with corrective lenses, by type of prescription according to color and frequency of use: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Color and frequency of use	Persons 3 years and over with corrective lenses <sup>1</sup>	Corrective lenses prescribed for:			Persons 3 years and over with corrective lenses <sup>1</sup>	Corrective lenses prescribed for:		
		Near vision only	Distance vision only	Both		Near vision only	Distance vision only	Both
<u>Total</u>	Number of person in thousands				Percent distribution			
Total <sup>2</sup> -----	86,020	30,822	9,929	42,179	100.0	35.8	11.5	49.0
All of the time----	59,749	18,776	5,994	33,296	100.0	31.4	10.0	55.7
Most of the time---	16,516	6,845	2,496	6,611	100.0	41.4	15.1	40.0
Hardly ever-----	7,734	4,139	1,228	1,829	100.0	53.5	15.9	23.6
Never-----	1,815	1,004	197	373	100.0	55.3	10.9	20.6
<u>White</u>								
Total <sup>2</sup> -----	79,611	28,343	9,367	39,092	100.0	35.6	11.8	49.1
All of the time----	55,901	17,423	5,689	31,226	100.0	31.2	10.2	55.9
Most of the time---	14,889	6,165	2,333	5,893	100.0	41.4	15.7	39.6
Hardly ever-----	7,031	3,778	1,153	1,614	100.0	53.7	16.4	23.0
Never-----	1,605	923	178	296	100.0	57.5	11.1	18.4
<u>Nonwhite</u>								
Total <sup>2</sup> -----	6,408	2,478	562	3,087	100.0	38.7	8.8	48.2
All of the time----	3,848	1,353	306	2,070	100.0	35.2	8.0	53.8
Most of the time---	1,627	680	163	718	100.0	41.8	10.0	44.1
Hardly ever-----	703	361	75	214	100.0	51.4	10.7	30.4
Never-----	210	80	*	77	100.0	38.1	*	36.7

<sup>1</sup>Includes persons with other and unknown type of prescription.

<sup>2</sup>Includes persons with unknown frequency of use.

Table 16. Number and percent distribution of persons 3 years of age and over with corrective lenses, by type of prescription according to family income and frequency of use: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Family income and frequency of use	Persons 3 years and over with corrective lenses <sup>1</sup>	Corrective lenses prescribed for:			Persons 3 years and over with corrective lenses <sup>1</sup>	Corrective lenses prescribed for:		
		Near vision only	Distance vision only	Both		Near vision only	Distance vision only	Both
<u>All incomes<sup>2</sup></u>	Number of persons in thousands				Percent distribution			
Total <sup>3</sup> -----	86,020	30,822	9,929	42,179	100.0	35.8	11.5	49.0
All of the time----	59,749	18,776	5,994	33,296	100.0	31.4	10.0	55.7
Most of the time---	16,516	6,845	2,496	6,611	100.0	41.4	15.1	40.0
Hardly ever-----	7,734	4,139	1,228	1,829	100.0	53.5	15.9	23.6
Never-----	1,815	1,004	197	373	100.0	55.3	10.9	20.6
<u>Under \$5,000</u>								
Total <sup>3</sup> -----	29,572	9,528	2,251	16,810	100.0	32.2	7.6	56.8
All of the time----	21,733	6,348	1,369	13,464	100.0	29.2	6.3	62.0
Most of the time---	4,868	1,819	518	2,373	100.0	37.4	10.6	48.7
Hardly ever-----	2,268	1,032	312	753	100.0	45.5	13.8	33.2
Never-----	622	319	*	180	100.0	51.3	*	28.9
<u>\$5,000 and over</u>								
Total <sup>3</sup> -----	52,320	19,830	7,372	23,159	100.0	37.9	14.1	44.3
All of the time----	35,058	11,473	4,445	18,078	100.0	32.7	12.7	51.6
Most of the time---	10,915	4,732	1,906	3,905	100.0	43.4	17.5	35.8
Hardly ever-----	5,133	2,943	865	985	100.0	57.3	16.9	19.2
Never-----	1,119	652	146	166	100.0	58.3	13.0	14.8

<sup>1</sup>Includes persons with other and unknown type of prescription.

<sup>2</sup>Includes persons of unknown family income.

<sup>3</sup>Includes persons with unknown frequency of use.

Table 17. Number and percent distribution of persons 17 years of age and over in the labor force with corrective lenses, by type of prescription according to occupation and frequency of use: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Occupation and frequency of use	Persons 17 years and over with corrective lenses <sup>1</sup>	Corrective lenses prescribed for:			Persons 17 years and over with corrective lenses <sup>1</sup>	Corrective lenses prescribed for:		
		Near vision only	Distance vision only	Both		Near vision only	Distance vision only	Both
<u>All occupations</u> <sup>2</sup>	Number of persons in thousands				Percent distribution			
Total <sup>3</sup> -----	45,010	18,071	4,956	20,342	100.0	40.1	11.0	45.2
All of the time----	30,990	10,978	3,078	16,069	100.0	35.4	9.9	51.9
Most of the time---	8,915	4,093	1,135	3,378	100.0	45.9	12.7	37.9
Hardly ever-----	4,133	2,440	639	740	100.0	59.0	15.5	17.9
Never-----	868	519	98	132	100.0	59.8	11.3	15.2
<u>White-collar workers</u>								
Total <sup>3</sup> -----	23,371	9,236	3,009	10,368	100.0	39.5	12.9	44.4
All of the time----	15,954	5,398	1,888	8,252	100.0	33.8	11.8	51.7
Most of the time---	4,727	2,191	687	1,715	100.0	46.4	14.5	36.3
Hardly ever-----	2,233	1,363	389	339	100.0	61.0	17.4	15.2
Never-----	408	268	*	*	100.0	65.7	*	*
<u>Blue-collar workers</u>								
Total <sup>3</sup> -----	13,697	5,823	1,261	6,002	100.0	42.5	9.2	43.8
All of the time----	9,461	3,669	783	4,698	100.0	38.8	8.3	49.7
Most of the time---	2,700	1,252	277	1,045	100.0	46.4	10.3	38.7
Hardly ever-----	1,193	718	160	206	100.0	60.2	13.4	17.3
Never-----	310	170	*	*	100.0	54.8	*	*
<u>Service workers</u>								
Total <sup>3</sup> -----	5,655	2,108	489	2,871	100.0	37.3	8.6	50.8
All of the time----	3,918	1,290	277	2,257	100.0	32.9	7.1	57.6
Most of the time---	1,077	469	131	442	100.0	43.5	12.2	41.0
Hardly ever-----	534	288	68	137	100.0	53.9	12.7	25.7
Never-----	112	56	*	*	100.0	50.0	*	*
<u>Farm workers</u>								
Total <sup>3</sup> -----	1,866	765	123	912	100.0	41.0	6.6	48.9
All of the time----	1,396	555	87	718	100.0	39.8	6.2	51.4
Most of the time---	299	134	*	140	100.0	44.8	*	46.8
Hardly ever-----	136	51	*	53	100.0	37.5	*	39.0
Never-----	*	*	*	*	100.0	*	*	*

<sup>1</sup>Includes persons with other and unknown type of prescription.

<sup>2</sup>Includes persons of unknown occupation.

<sup>3</sup>Includes persons with unknown frequency of use.

Table 18. Number of persons 3 years of age and over with corrective lenses, by whether or not lenses were obtained in past 2 years, type of lens, source of prescription, and selected characteristics: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Persons 3 years and over with corrective lenses	Did not obtain lenses in the past 2 years	Did obtain lenses in past 2 years		Source of optical prescription in past 2 years					
			Not examined	Examined	Eyeglasses only			Contact lenses with or without eyeglasses		
					Ophthalmologist	Optometrist	Other <sup>1</sup>	Ophthalmologist	Optometrist	Other <sup>1</sup>
<u>Age</u>	Number of persons in thousands									
All ages, 3 years and over-	<sup>2</sup> 86,020	36,753	705	48,562	15,753	26,972	4,645	490	592	110
3-16 years-----	8,263	1,209	*	7,050	2,725	3,640	546	66	63	*
17-24 years-----	9,310	3,026	*	6,273	1,601	3,507	581	235	295	55
25-44 years-----	18,914	8,428	53	10,433	3,136	5,998	950	133	184	*
45 years and over-----	49,533	24,090	637	24,806	8,291	13,827	2,568	56	50	*
<u>Sex</u>										
Male-----	36,880	14,930	488	21,462	6,802	12,048	2,244	142	183	*
Female-----	49,140	21,823	217	27,100	8,951	14,923	2,401	348	409	68
<u>Region</u>										
Northeast-----	23,493	9,857	81	13,556	4,635	7,369	1,276	110	135	*
North Central----	25,291	10,777	139	14,376	4,301	8,561	1,212	109	163	*
South-----	23,530	10,155	356	13,018	4,218	6,877	1,559	174	160	*
West-----	13,706	5,964	129	7,613	2,599	4,164	598	98	134	*
<u>Residence</u>										
All SMSA's-----	55,735	23,326	342	32,067	11,376	16,689	3,108	379	425	90
Outside SMSA's---	30,284	13,427	362	16,495	4,377	10,282	1,537	111	167	*
<u>Family income</u>										
Under \$5,000----	29,572	14,708	480	14,383	3,628	8,691	1,787	100	141	*
\$5,000 and over--	52,320	19,997	188	32,135	11,460	17,243	2,545	379	438	69
<u>Education of head of family</u>										
12 years or less-	65,213	28,489	635	36,088	9,991	21,715	3,812	198	320	53
13 years and over-----	19,290	7,513	*	11,730	5,587	4,865	665	289	271	54

<sup>1</sup>Includes persons with unknown source of optical prescription.

<sup>2</sup>Includes persons of unknown family income and unknown education of head of family.

Table 19. Percent distribution of persons 3 years of age and over examined for corrective lenses in past 2 years, by source of prescription according to selected characteristics: United States, July 1965-June 1966

[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Persons examined for corrective lenses in past 2 years	Source of optical prescription in past 2 years					
		Eyeglasses only			Contact lenses with or without eyeglasses		
		Ophthalmologist	Optometrist	Other <sup>1</sup>	Ophthalmologist	Optometrist	Other <sup>1</sup>
<u>Age</u>		Percent distribution					
All ages, 3 years and over-----	100.0	32.4	55.5	9.6	1.0	1.2	0.2
3-16 years-----	100.0	38.7	51.6	7.7	0.9	0.9	*
17-24 years-----	100.0	25.5	55.9	9.3	3.7	4.7	0.9
25-44 years-----	100.0	30.1	57.5	9.1	1.3	1.8	*
45 years and over-----	100.0	33.4	55.7	10.4	0.2	0.2	*
<u>Sex</u>							
Male-----	100.0	31.7	56.1	10.5	0.7	0.9	*
Female-----	100.0	33.0	55.1	8.9	1.3	1.5	0.3
<u>Region</u>							
Northeast-----	100.0	34.2	54.4	9.4	0.8	1.0	*
North Central-----	100.0	29.9	59.6	8.4	0.8	1.1	*
South-----	100.0	33.4	52.8	12.0	1.3	1.2	*
West-----	100.0	34.1	54.7	7.9	1.3	1.8	*
<u>Residence</u>							
All SMSA's-----	100.0	35.5	52.0	9.7	1.2	1.3	0.3
Outside SMSA's-----	100.0	26.5	62.3	9.3	0.7	1.0	*
<u>Family income</u>							
Under \$5,000-----	100.0	25.2	60.4	12.4	0.7	1.0	*
\$5,000 and over-----	100.0	35.7	53.7	7.9	1.2	1.4	0.2
<u>Education of head of family</u>							
12 years or less-----	100.0	27.7	60.2	10.6	0.5	0.9	0.1
13 years and over-----	100.0	47.6	41.5	5.7	2.5	2.3	0.5

<sup>1</sup>Includes unknown source of optical prescription, amounting to about 8.9 percent of those examined.

## APPENDIX I

### TECHNICAL NOTES ON METHODS

#### Background of This Report

This report is one of a series of statistical reports prepared by the National Health Survey. It is based on information collected in a continuing nationwide sample of households in the Health Interview Survey, a major part of the program.

The Health Interview Survey utilizes a questionnaire which, in addition to personal and demographic characteristics, obtains information on illnesses, injuries, chronic conditions and impairments, and other health topics. As data relating to each of these various broad topics are tabulated and analyzed, separate reports are issued which cover one or more of the specific topics. The present report is based on the consolidated sample for 52 weeks of interviewing ending June 1966.

The population covered by the sample for the Health Interview Survey is the civilian, noninstitutional population of the United States living at the time of the interview. The sample does not include members of the Armed Forces, U.S. nationals living in foreign countries, or crews of vessels.

#### Statistical Design of the Health Interview Survey

*General plan.*—The sampling plan of the survey follows a multistage probability design which permits a continuous sampling of the civilian population of the United States. The first stage of this design consists of drawing a sample of 357 from about 1,900 geographically defined primary sampling units (PSU's) into which the United States has been divided. A PSU is a county, a group of contiguous counties, or a standard metropolitan statistical area.

With no loss in general understanding, the remaining stages can be combined and treated in this discussion as an ultimate stage. Within PSU's, then, ultimate stage units called segments are defined in such a manner that each segment contains an expected nine households. A segment consists of a cluster of neighboring households or addresses. Two general types of segments are used: (1) area segments which are defined geographically, and (2) B segments which are defined from a list of addresses from the Decennial Census and Survey

of Construction. Each week a random sample of about 90 segments is drawn. In the approximately 800 households in these segments, household members are interviewed concerning factors related to health.

Since the household members interviewed each week are a representative sample of the population, samples for successive weeks can be combined into larger samples. Thus the design permits both continuous measurement of characteristics of high incidence or prevalence in the population and, through the larger consolidated samples, more detailed analysis of less common characteristics and smaller categories. The continuous collection has administrative and operational advantages as well as technical assets since it permits field work to be handled with an experienced, stable staff.

*Sample size and geographic detail.*—The national sample plan for the 12-month period ending in June included about 134,000 persons from 42,000 households in about 4,700 segments.

The overall sample was designed in such a fashion that tabulations can be provided for each of the major geographic regions and for urban and rural sectors of the United States.

*Collection of data.*—Field operations for the household survey are performed by the Bureau of the Census under specifications established by the National Center for Health Statistics. In accordance with these specifications the Bureau of the Census selects the sample, conducts the field interviewing as an agent of the Center, and performs a manual editing and coding of the questionnaires. The Health Interview Survey, using Center electronic computers, carries out further editing and tabulates the edited data.

*Estimating methods.*—Each statistic produced by the survey—for example, the number of persons 3 years or older with corrective lenses—is the result of two stages of ratio estimation. In the first of these, the control factor is the ratio of the 1960 decennial population count to the 1960 estimated population in the National Health Survey's first-stage sample of PSU's. These factors are applied for some 25 color-residence classes.

Later, ratios of sample-produced estimates of the population to official Bureau of the Census figures for current population in about 60 age-sex-color classes

are computed and serve as second-stage factors for ratio estimating.

The effect of the ratio-estimating process is to make the sample more closely representative of the population by age, sex, color, and residence, thus reducing sampling variance.

As noted, each week's sample represents the population living during that week and characteristics of this population. Consolidation of samples over a time period, say a calendar quarter, produces estimates of average characteristics of the U.S. population for that calendar quarter. Similarly, population data for a year are averages of the four quarterly figures.

### General Qualifications

*Nonresponse.*—Data were adjusted for nonresponse by a procedure which imputes to persons in a household which was not interviewed the characteristics of persons in households in the same segment which were interviewed. The total noninterview rate was 5 percent—1 percent was refusal, and the remainder was primarily due to the failure to find any eligible household respondent after repeated trials.

*The interview process.*—The statistics presented in this report are based on replies secured in interviews of persons in the sampled households. Each person 19 years of age and over, available at the time of interview, was interviewed individually. Proxy respondents within the household were employed for children and for adults not available at the time of the interview, provided the respondent was closely related to the person about whom information was being obtained.

There are limitations to the accuracy of diagnostic and other information collected in household interviews. For diagnostic information, the household respondent can, at best, pass on to the interviewer only the information the physician has given the family. For conditions not medically attended, diagnostic information is often no more than a description of symptoms. However, other facts, such as the number of disability days caused by the condition, can be obtained more accurately from household members than from any other source since only the persons concerned are in a position to report this information.

*Rounding of numbers.*—The original tabulations on which the data in this report are based show all estimates to the nearest whole unit. All consolidations were made from the original tabulations using the estimates to the nearest unit. In the final published tables the figures are rounded to the nearest thousand, although these are not necessarily accurate to that detail. Devised statistics, such as rates and percent distributions, are computed after the estimates on which these are based have been rounded to the nearest thousand.

*Population figures.*—Some of the published tables include population figures for specified categories. Ex-

cept for certain overall totals by age and sex, which are adjusted to independent estimates, these figures are based on the sample of households in the National Health Survey. These are given primarily to provide denominators for rate computation and for this purpose are more appropriate for use with the accompanying measures of health characteristics than other population data that may be available. In some instances these will permit users to recombine published data into classes more suitable to their specific needs. With the exception of the overall totals by age and sex mentioned above, the population figures differ from corresponding figures (which are derived from different sources) published in reports of the Bureau of the Census. For population data for general use, see the official estimates presented in Bureau of the Census reports in the P-20, P-25, and P-60 series.

### Reliability of Estimates

Since the estimates are based on a sample, they will differ somewhat from the figures that would have been obtained if a complete census had been taken using the same schedules, instructions, and interviewing personnel and procedures. As in any survey, the results are also subject to measurement error.

The standard error is primarily a measure of sampling variability, that is, the variations that might occur by chance because only a sample of the population is surveyed. As calculated for this report, the standard error also reflects part of the variation which arises in the measurement process. It does not include estimates of any biases which might lie in the data. The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census by less than the standard error. The chances are about 95 out of 100 that the difference would be less than twice the standard error and about 99 out of 100 that it would be less than  $2\frac{1}{2}$  times as large.

The relative standard error of an estimate is obtained by dividing the standard error of the estimate by the estimate itself and is expressed as a percentage of the estimate. Included in this appendix are charts from which the relative standard errors can be determined for estimates shown in the report. In order to derive relative errors which would be applicable to a wide variety of health statistics and which could be prepared at a moderate cost, a number of approximations were required. As a result, the charts provide an estimate of the approximate relative standard error rather than the precise error for any specific aggregate or percentage.

Three classes of statistics for the health survey are identified for purposes of estimating variances.

*Narrow range.*—This class consists of (1) statistics which estimate a population attribute, e.g., the number of persons in a particular income group, and

(2) statistics for which the measure for a single individual for the period of reference is usually either 0 or 1, on occasion may take on the value 2, and very rarely, 3.

*Medium range.*—This class consists of other statistics for which the measure for a single individual for the period of reference will rarely lie outside the range 0 to 5.

*Wide range.*—This class consists of statistics for which the measure for a single individual for the period of reference frequently will range from 0 to a number in excess of 5, e.g., the number of days of bed disability experienced during the year.

In addition to classifying variables according to whether they are narrow-, medium-, or wide-range, statistics in the survey are further defined as:

*Type A.*—Statistics on prevalence and incidence data for which the period of reference in the questionnaire is 12 months.

*Type B.*—Incidence-type statistics for which the period of reference in the questionnaire is 2 weeks.

*Type C.*—Statistics for which the reference period is 6 months. Only the charts on sampling

error applicable to data contained in this report are presented.

*General rules for determining relative sampling errors.*—The "guide" below, together with the following rules, will enable the reader to determine approximate relative standard errors from the charts for estimates presented in this report.

Rule 1. *Estimates of aggregates:* Approximate relative standard errors for estimates of aggregates such as the number of persons with a given characteristic are obtained from appropriate curves on page 40. The number of persons in the total U.S. population or in an age-sex class of the total population is adjusted to official Bureau of the Census figures and is not subject to sampling error.

Rule 2. *Estimates of percentages in a percent distribution:* Relative standard errors for percentages in a percent distribution of a total are obtained from appropriate curves on page 41. For values which do not fall on one of the curves presented in the chart, visual interpolation will provide a satisfactory approximation.

## Guide to Use of Relative Standard Error Charts

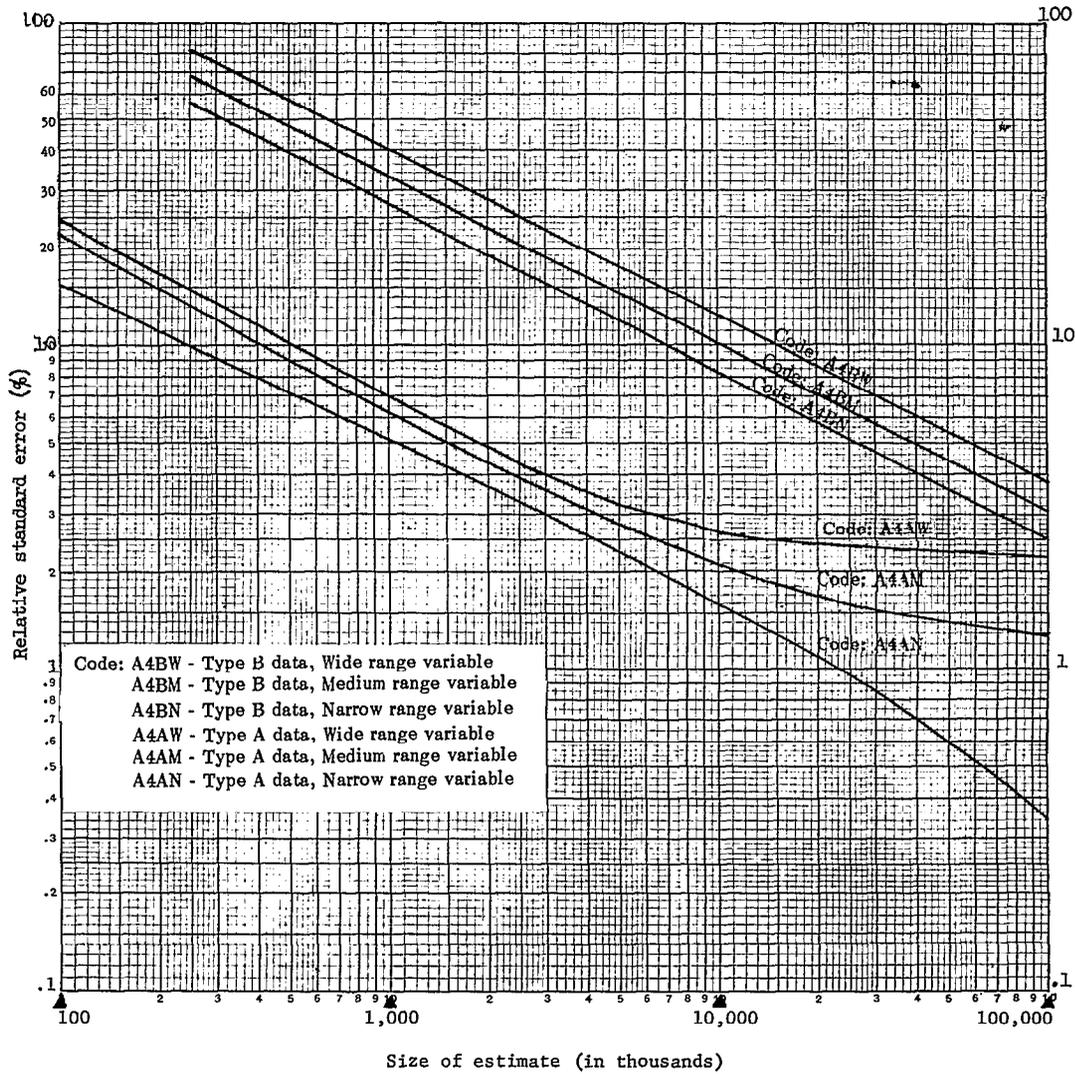
The code shown below identifies the appropriate curve to be used in estimating the relative standard error of the statistic described. The four components of each code describe the statistic as follows: (1) A = ag-

gregate, P = percentage; (2) the number of calendar quarters of data collection; (3) the type of the statistic as described on page 39; and (4) the range of the statistic as described on page 38.

Statistic	Use:		
	Rule	Code	on page
Number of: Persons in the U.S. population or total number of persons in any age-sex category-----	Not subject to sampling error		
Persons in any other population group-----	1	A4AN	40
Persons with corrective lenses-----	1	A4AN	40
Percent distribution of: Persons with corrective lenses by characteristic----	2	P4AN-M	41

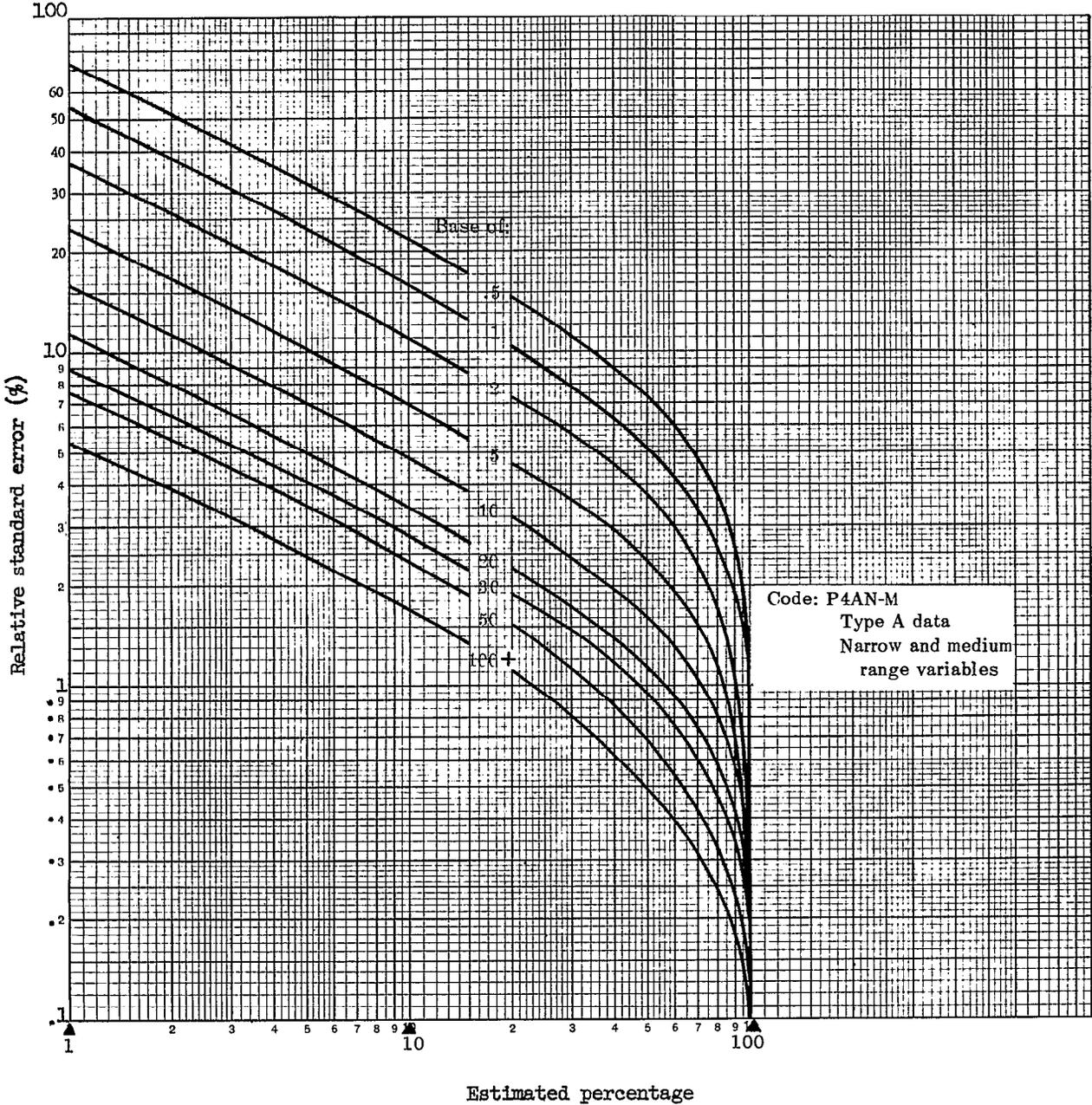


Relative standard errors for aggregates based on four quarters of data collection  
for data of all types and ranges



Example of use of chart: An aggregate of 2,000,000 (on scale at bottom of chart) for a Narrow range Type A statistic (code: A4AN) has a relative standard error of 3.6 percent, (read from scale at left side of chart), or a standard error of 72,000 (3.6 percent of 2,000,000). For a Wide range Type B statistic (code: A4BW), an aggregate of 6,000,000 has a relative error of 16.0 percent or a standard error of 960,000 (16 percent of 6,000,000).

Relative standard errors for percentages based on four quarters of data collection  
 for type A data, Narrow and Medium range  
 (Base of percentage shown on curves in millions)



Example of use of chart: An estimate of 20 percent (on scale at bottom of chart) based on an estimate of 10,000,000 has a relative standard error of 3.2 percent (read from the scale at the left side of the chart), the point at which the curve for a base of 10,000,000 intersects the vertical line for 20 percent. The standard error in percentage points is equal to 20 percent X 3.2 percent or 0.64 percentage points.

## APPENDIX II

### DEFINITIONS OF CERTAIN TERMS USED IN THIS REPORT

#### Terms Relating to Corrective Lenses

*Corrective lenses.*—Corrective lenses include eyeglasses, contact lenses, or both. It is limited to visual aids worn to correct or improve vision and therefore excludes sunglasses worn only to filter light, safety glasses worn only for protection of the eyes, hand magnifying glasses, and other such devices. However, if the safety glasses are worn also for correction or improvement of vision, they would then be considered corrective lenses, as would prescription sunglasses.

*Type of correction.*—Lenses are used for the correction of near vision, distance vision, and defective vision due to specific eye conditions.

Lenses prescribed for the correction of near vision aid the person in reading or doing "close" work. For persons who cannot read, the term "close" work is defined as seeing small objects clearly enough to recognize what they are. Lenses prescribed for the correction of distance vision aid the person in seeing distant objects and are used in such activities as driving a car, watching a movie, or seeing entries on a blackboard. Persons who reported having "bifocals" were considered as having correction for both near and distance vision, but the use of both types of lenses was verified by the interviewer.

When the respondent reported only in terms of an eye condition, such as astigmatism or strabismus, the type of correction was classified as "other" than correction of near or distance vision.

For persons who obtained their corrective lenses without a prescription, the respondent's reply regarding type of correction was accepted.

*Frequency of use of corrective lenses.*—The options read to the respondent, "all of the time, most of the time, hardly ever, never" represent a descending scale of frequency of use. For persons who use their lenses for the correction of near vision only or distance vision only, the scale refers only to the purpose for which the lenses were prescribed or intended, e.g., if a person uses his lenses to read only the daily newspaper each morning and does no other reading or close work he would be considered as a person who uses his glasses "all of the time" for "reading or close work." If a person has both eyeglasses and contact lenses, or more than one pair of either, the question on frequency of use applies to all lenses used, e.g., if a person wears

contact lenses at work and eyeglasses at all other times, he would be considered as wearing corrective lenses "all of the time."

*Source of optical prescription.*—Prescriptions for corrective lenses are usually obtained from either an ophthalmologist or an optometrist.

An ophthalmologist is a physician who specializes in the medical and surgical care of the eyes and may prescribe drugs or other treatment as well as lenses. An optometrist performs visual analysis by examining the eyes, prescribing lenses and other vision aids, visual training, and orthoptics or other optical aids. The optometrist does not treat eye diseases or perform surgery.

#### Demographic, Social, and Economic Terms

*Age.*—The age recorded for each person is the age at last birthday. Age is recorded in single years and grouped in a variety of distributions depending upon the purpose of the table.

*Region.*—For the purpose of classifying the population by geographic area, the States are grouped into four regions. These regions, which correspond to those used by the U.S. Bureau of the Census, are as follows:

<i>Region</i>	<i>States Included</i>
Northeast -----	Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania
North Central ---	Michigan, Ohio, Indiana, Illinois, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas
South -----	Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, Texas
West -----	Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Alaska, Oregon, California, Hawaii

*Residence.*—The place of residence of a member of the civilian, noninstitutional population is classified as inside a standard metropolitan statistical area (SMSA) or outside an SMSA.

*Standard metropolitan statistical areas.*—The definitions and titles of SMSA's are established by the U.S. Bureau of the Budget with the advice of the Federal Committee on Standard Metropolitan Statistical Areas. There were 212 SMSA's, as defined for the 1960 decennial census, for which data may be provided for places of residence in the Health Interview Survey.

The definition of an individual SMSA involves two considerations: first, a city or cities of specified population which constitute the central city and identify the county in which it is located as the central county; and, second, economic and social relationships with contiguous counties (except in New England) which are metropolitan in character, so that the periphery of the specific metropolitan area may be determined. SMSA's are not limited by State boundaries.

*Color.*—In this report, the population has been subdivided into two groups according to "white" and "non-white." "Nonwhite" includes Negro, American Indian, Chinese, Japanese, and so forth. Mexican persons are included with "white" unless definitely known to be Indian or of another nonwhite race.

*Income of family or of unrelated individuals.*—Each member of a family is classified according to the total income of the family of which he is a member. Within the household all persons related to each other by blood, marriage, or adoption constitute a family. Unrelated individuals are classified according to their own income.

The income recorded is the total of all income received by members of the family (or by an unrelated individual) in the 12-month period preceding the week of interview. Income from all sources is included, e.g., wages, salaries, rents from property, pensions, help from relatives, and so forth.

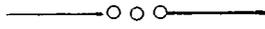
*Education.*—Each person age 17 or older is classified by education in terms of the highest grade of school completed. Only grades completed in regular schools, where persons are given a formal education, are included. A "regular" school is one which advances a person toward an elementary or high school diploma,

or a college, university, or professional school degree. Thus, education in vocational, trade, or business schools outside the regular school system is not counted in determining the highest grade of school completed.

*Occupation.*—A person's occupation may be defined as his principal job or business. For the purposes of this survey, the principal job or business is defined in one of the following ways. If the person worked during the 2-week-reference period of the interview, or had a job or business, the question concerning his occupation (or what kind of work he was doing), applies to his job during that period. If the respondent held more than one job, the question is directed to the one at which he spent the most time. For an unemployed person, this question refers to the last full-time civilian job he had. A person who has a job to which he has not yet reported, and has never had a previous job or business, is classified as a "new worker."

The occupation classes presented in this report are listed below with the Census Code (*Classified Index of Occupations and Industries*).

<i>Occupational Category</i>	<i>Census Code</i>
<i>White-collar workers</i>	
Professional, technical, and kindred workers ----	000-195
Managers, officials, and proprietors, except farm-	250-285, R
Clerical and kindred workers .....	301-360, Y, Z
Sales workers .....	380-395, S
<i>Blue-collar workers</i>	
Craftsmen, foremen, and kindred workers .....	401-545, Q
Operatives and kindred workers .....	601-721, T, W
Laborers, except farm and mine .....	960-973, X
<i>Service workers</i>	
Private household workers .....	801-803, P
Other service workers .....	810-890
<i>Farm workers</i>	
Farmers and farm managers .....	222, N
Farm laborers and foremen .....	901, 905, U, V
Unknown .....	995



# APPENDIX III

## FORM FOR RECORDING INFORMATION ON CORRECTIVE LENSES

EYEGLASS PAGE																																																		
<p><b>Item 0. These next questions are about eyeglasses and contact lenses. Does — have eyeglasses or contact lenses? (Mark for each person.)</b></p> <table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr> <th>Person 01</th> <th>Person 02</th> <th>Person 03</th> <th>Person 04</th> <th>Person 05</th> <th>Person 06</th> <th>Person 07</th> <th>Person 08</th> <th>Person 09</th> <th>Person 10</th> </tr> <tr> <td><input type="radio"/> Yes</td> </tr> <tr> <td><input type="radio"/> No</td> </tr> <tr> <td><input type="radio"/> Und 3</td> </tr> </table>											Person 01	Person 02	Person 03	Person 04	Person 05	Person 06	Person 07	Person 08	Person 09	Person 10	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Und 3																											
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<p><b>FILL ONE EYEGLASS PAGE (QUESTIONS 1-6) FOR EACH PERSON WITH "YES" MARKED IN ITEM 0 FOR EYEGLASSES OR CONTACT LENSES</b></p>																																																		
<p>1. Person number <span style="float: right;">Write in and mark</span> <input style="width: 50px;" type="text"/></p>																																																		
<p>2. Which does — have: eyeglasses, contact lenses or both? <span style="float: right;">Eyeglasses    Contact lenses    Both</span></p> <p style="text-align: right;"><input type="radio"/>    <input type="radio"/>    <input type="radio"/></p>																																																		
<p>Question 3 refers to all eyeglasses and contact lenses which a person has.</p> <p>3a. Are any of — eyeglasses (or contact lenses) prescribed for reading and close work? <span style="float: right;">Yes    No    V</span></p> <p style="text-align: right;"><input type="radio"/>    <input type="radio"/>    <input type="radio"/></p> <p>3b. Are any of — eyeglasses (or contact lenses) prescribed for seeing distant objects better? <span style="float: right;">Yes    No    V</span></p> <p style="text-align: right;"><input type="radio"/>    <input type="radio"/>    <input type="radio"/></p>																																																		
<p>If "No" to both 3a and 3b, ask 3c. <span style="float: right;">Or    V</span></p> <p style="text-align: right;"><input type="radio"/>    <input type="radio"/></p> <p>c. What are his eyeglasses (or contact lenses) prescribed for? <input style="width: 150px;" type="text"/></p>																																																		
<p>If "Yes" in 3a only, ask 4a. <span style="float: right;">All    Most    Hardly    Never    V</span></p> <p style="text-align: right;"><input type="radio"/>    <input type="radio"/>    <input type="radio"/>    <input type="radio"/></p> <p>4a. How often does — use his eyeglasses (and contact lenses) while reading or doing close work: All of the time, most of the time, hardly ever, or never?</p>																																																		
<p>If "Yes" in 3b only, ask 4b. <span style="float: right;">All    Most    Hardly    Never    V</span></p> <p style="text-align: right;"><input type="radio"/>    <input type="radio"/>    <input type="radio"/>    <input type="radio"/></p> <p>4b. How often does — use his eyeglasses (and contact lenses) for seeing distant objects: All of the time, most of the time, hardly ever, or never?</p>																																																		
<p>For any other combination of entries in 3a, and 3b, ask 4c. <span style="float: right;">All    Most    Hardly    Never    V</span></p> <p style="text-align: right;"><input type="radio"/>    <input type="radio"/>    <input type="radio"/>    <input type="radio"/></p> <p>4c. How often does — use his eyeglasses (and contact lenses): All of the time, most of the time, hardly ever, or never?</p>																																																		
<p>Question 5 refers to the FIRST visual aid (eyeglasses or contact lenses) that the person got. <span style="float: right;">Write in and mark</span></p> <p style="text-align: right;"><input style="width: 50px;" type="text"/></p>																																																		
<p>Question 6 refers to the LAST visual aid (eyeglasses or contact lenses) that the person got. <span style="float: right;">During last 2 years -- ask 6a</span></p> <p style="text-align: right;"><input type="radio"/></p> <p>6a. Did — obtain his LAST pair of eyeglasses (or contact lenses) during the last 2 years or before that time? <span style="float: right;">More than 2 years -- Stop (0)</span></p> <p style="text-align: right;"><input type="radio"/></p>																																																		
<p>Ask 6b, c, and d for all persons examined for eyeglasses during past 2 years. <span style="float: right;">WASHINGTON USE ONLY</span></p> <p style="text-align: right;"><input type="radio"/>    <input type="radio"/></p> <p>b. Who examined — for those eyeglasses (or contact lenses)? <span style="float: right;">Not examined -- STOP (9)</span></p> <p style="text-align: right;"><input type="radio"/>    <input type="radio"/></p> <p>Name of doctor or person <input style="width: 150px;" type="text"/></p> <p>c. Where was he examined?</p> <p>Name of place <input style="width: 150px;" type="text"/></p> <p>Kind of place <input style="width: 150px;" type="text"/></p> <p>Street address <input style="width: 150px;" type="text"/></p> <p>City <input style="width: 50px;" type="text"/> State <input style="width: 50px;" type="text"/></p> <p>d. Is the doctor (person) who examined — an ophthalmologist or an optometrist?</p> <p><input type="radio"/> Ophthalmologist (1) <input style="width: 50px;" type="text"/></p> <p><input type="radio"/> Optometrist (4)</p> <p><input type="radio"/> Other (Describe) <input style="width: 50px;" type="text"/></p>																																																		
<p><b>FILL AFTER COMPLETING INTERVIEW.</b></p> <p>If person was examined by a doctor or other person not connected with a commercial company, check the telephone directory and mark appropriate circle based on the telephone listing.</p>																																																		
<p><b>Item V:</b></p> <p>Not verifiable because —</p> <ul style="list-style-type: none"> <li><input type="radio"/> Address in 6c not in local area (V)</li> <li><input type="radio"/> Name not listed in local directory (6)</li> <li><input type="radio"/> No entry of name in 6b. (V)</li> </ul> <p>Verified and listed as —</p> <ul style="list-style-type: none"> <li><input type="radio"/> Optometrist (4)</li> <li><input type="radio"/> Ophthalmologist (MD) (1)</li> <li><input type="radio"/> General Practitioner (MD) (2)</li> <li><input type="radio"/> Other specialist (MD) (2)</li> <li><input type="radio"/> MD, but specialty DK (3)</li> <li><input type="radio"/> "Doctor" but DK whether MD or Optometrist (5)</li> <li><input type="radio"/> Other → <input style="width: 100px;" type="text"/></li> </ul>																																																		

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