

Department of Epidemiology
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EPID 160

Principles of Epidemiology

Fall 1966

Faculty Guide

CHANGES IN POPULATION AND HEALTH PROBLEMS

Changes in Population Composition

Increase in size of population

Increase in numbers: after slump during depression the percent of increase over preceding census is increasing.

Change in age composition

Increase in proportion of population contributed by the elderly.
Decrease in the "productive" ages.

Change in sex composition

Increase in proportion of females in adult population, sex discrepancy increasing.

Population pyramids

U.S. 1900 resembles Phillipines 1963 (note the change in scale for the Phillipines).

U.S. 1960 greater proportion of middle aged and elderly as compared to very young (a consequence of reduction of factors leading to high infant mortality).

Change in life expectancy

Major increase in life expectancy in new born and young. Very little change over age 40 (i.e. "aging" of population a result of more people achieving age 40 or 60 rather than more people living longer having achieved those ages).

Increased longevity more pronounced in females than males (both races, all ages).

Evidence that non-white improvement catching up with white, but still not equal to white.

Birth and death rates

Slump in birth rate during depression years.

Increase following World War II.

Decline in infant death rate halted since mid 1950's.

Annual mortality rates per 1,000 persons at specific ages

Least satisfactory decline in middle aged and elderly males.

ASSIGNMENT

Pages 1-8

1. What are the predominant features of the population changes in U.S. since 1850? And what are the implications for health and health care?

2. What are the similarities and differences between the population pyramids for U.S. and Phillipines?

3. Describe the major changes in life expectancy shown in page 8 for different time periods for each race and sex and age of the U.S.

Page 9

4. Describe the trend in birth and death rates in the U.S. for whites and non-whites.

5. What possible forces may explain the changes noted?

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6. What facts emerge in respect of the changing mortality rates for the different sex-age groups shown.

Pages 12 and 13

7. In respect of the 6 diseases shown what are the changes seen in mortality rates for each sex?

8. What changes have occurred in the leading causes of death in the U.S.?

INFANT MORTALITY RATES BY RACE: BIRTH-REGISTRATION STATES, 1915-1960

(Exclusive of fetal deaths. Deaths under 1 year per 1,000 live births in each specified group)

<u>YEAR</u>	<u>All Races</u>	<u>White</u>	<u>Nonwhite</u>
1960.	26.0	22.9	43.2
1959.	26.4	23.2	44.0
1958.	27.1	23.8	45.7
1957.	26.3	23.3	43.7
1956.	26.0	23.2	42.1
1955.	26.4	23.6	42.8
1954.	26.6	23.9	42.9
1953.	27.8	25.0	44.7
1952.	28.4	25.5	47.0
1951.	28.4	25.8	44.8
1950.	29.2	26.8	44.5
1949.	31.3	28.9	47.3
1948.	32.0	29.9	46.5
1947.	32.2	30.1	48.5
1946.	33.8	31.8	49.5
1945.	38.3	35.6	57.0
1944.	39.8	36.9	60.3
1943.	40.4	37.5	62.5
1942.	40.4	37.3	64.6
1941.	45.3	41.2	74.8
1940.	47.0	43.2	73.8
1939.	48.0	44.3	74.2
1938.	51.0	47.1	79.1
1937.	54.4	50.3	83.2
1936.	57.1	52.9	87.6
1935.	55.7	51.9	83.2
1934.	60.1	54.5	94.4
1933.	58.1	52.8	91.3
1932.	57.6	53.3	86.2
1931.	61.6	57.4	93.1
1930.	64.6	60.1	99.9
1929.	67.6	63.2	102.2
1928.	68.7	64.0	106.2
1927.	64.6	60.6	100.1
1926.	73.3	70.0	111.8
1925.	71.7	68.3	110.8
1924.	70.8	66.8	112.9
1923.	77.1	73.5	117.4
1922.	76.2	73.2	110.0
1921.	75.6	72.5	108.5
1920.	85.8	82.1	131.7
1919.	86.6	83.0	130.5
1918.	100.9	97.4	161.2
1917.	93.8	90.5	150.7
1916.	101.0	99.0	184.9
1915.	99.9	98.6	181.2