

CHAPTER 36

Tuberculosis, Deaths: Relation with Medical Radiation

Box 1 of Chap. 36

Summary: Regression Outputs, Tuberculosis, All Forms, Death Rates.

Below are the summary-results from all the regressions of MortRates upon PhysPops. MortRates are from Table 36-A, and PhysPops are from Table 3-A.

MALES

| Year MortRate | Year PhysPop | R-squared | Constant | Coeff. | Std Err | Coeff/S.E |
|------------------|-----------------|-----------|----------|---------|---------|-----------|
| 1940 | 1921 | 0.1387 | 101.3459 | -0.3326 | 0.3132 | -1.0618 |
| 1940 | 1923 | 0.1563 | 99.6695 | -0.3292 | 0.2890 | -1.1388 |
| 1940 | 1925 | 0.1987 | 100.2053 | -0.3442 | 0.2612 | -1.3176 |
| 1940 | 1927 | 0.2341 | 101.1808 | -0.3578 | 0.2447 | -1.4625 |
| 1940 | 1929 | 0.2275 | 98.7660 | -0.3413 | 0.2377 | -1.4359 |
| 1940 | 1931 | 0.2100 | 93.7415 | -0.2991 | 0.2192 | -1.3642 |
| 1940 | 1934 | 0.2320 | 91.1603 | -0.2767 | 0.1903 | -1.4542 |
| 1940 | 1936 | 0.2265 | 89.6338 | -0.2629 | 0.1837 | -1.4317 |
| 1940 | 1938 | 0.2247 | 87.6750 | -0.2459 | 0.1726 | -1.4243 |
| 1940 | 1940 | 0.2067 | 83.8602 | -0.2123 | 0.1572 | -1.3507 |
| 1950 | 1950 | 0.1737 | 40.0950 | -0.0892 | 0.0735 | -1.2132 |
| 1960 | 1960 | 0.1415 | 12.0470 | -0.0292 | 0.0272 | -1.0741 |
| 1970 | 1970 | -- | -- | -- | -- | -- |
| 1980 | 1980 | -- | -- | -- | -- | -- |
| 1990 | 1990 | -- | -- | -- | -- | -- |

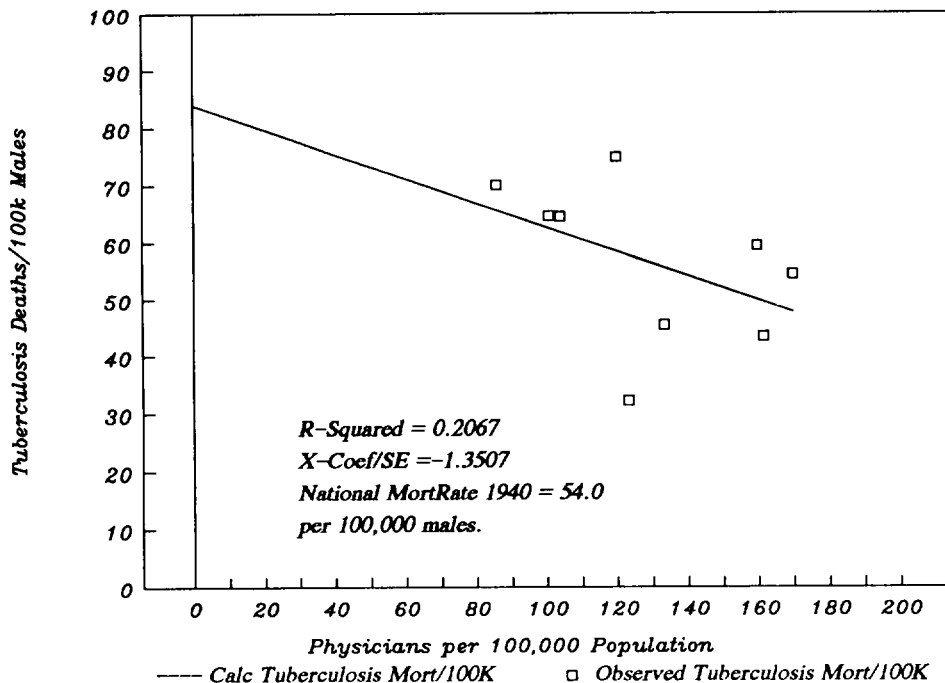
FEMALES.....

| Year MortRate | Year PhysPop | R-squared | Constant | Coeff. | Std Err | Coeff/S.E |
|------------------|-----------------|-----------|----------|---------|---------|-----------|
| 1940 | 1921 | 0.4426 | 120.5024 | -0.6038 | 0.2561 | -2.3577 |
| 1940 | 1923 | 0.4909 | 116.8396 | -0.5928 | 0.2282 | -2.5980 |
| 1940 | 1925 | 0.5301 | 111.6456 | -0.5712 | 0.2033 | -2.8101 |
| 1940 | 1927 | 0.6039 | 112.0405 | -0.5841 | 0.1788 | -3.2669 |
| 1940 | 1929 | 0.6249 | 110.2892 | -0.5748 | 0.1683 | -3.4153 |
| 1940 | 1931 | 0.6170 | 103.9682 | -0.5209 | 0.1551 | -3.3582 |
| 1940 | 1934 | 0.6527 | 98.1795 | -0.4716 | 0.1300 | -3.6268 |
| 1940 | 1936 | 0.6724 | 97.1170 | -0.4604 | 0.1215 | -3.7907 |
| 1940 | 1938 | 0.6698 | 93.8004 | -0.4314 | 0.1145 | -3.7685 |
| 1940 | 1940 | 0.6381 | 87.9447 | -0.3790 | 0.1079 | -3.5128 |
| 1950 | 1950 | 0.5942 | 35.9541 | -0.1648 | 0.0515 | -3.2015 |
| 1960 | 1960 | 0.3334 | 6.0716 | -0.0243 | 0.0130 | -1.8711 |
| 1970 | 1970 | -- | -- | -- | -- | -- |
| 1980 | 1980 | -- | -- | -- | -- | -- |
| 1990 | 1990 | -- | -- | -- | -- | -- |

1940 MortRate, Males, Tuberculosis Deaths, versus
1940 PhysPop Values for the 9 Census Divisions, USA.

Not Significant

PhysPop is a surrogate for accumulated dose from medical irradiation.



1940 MortRate, Females, Tuberculosis, All forms Deaths, versus
1940 PhysPop Values for the 9 Census Divisions, USA.

Highly Significant. Direction is INVERSE.

PhysPop is a surrogate for accumulated dose from medical irradiation

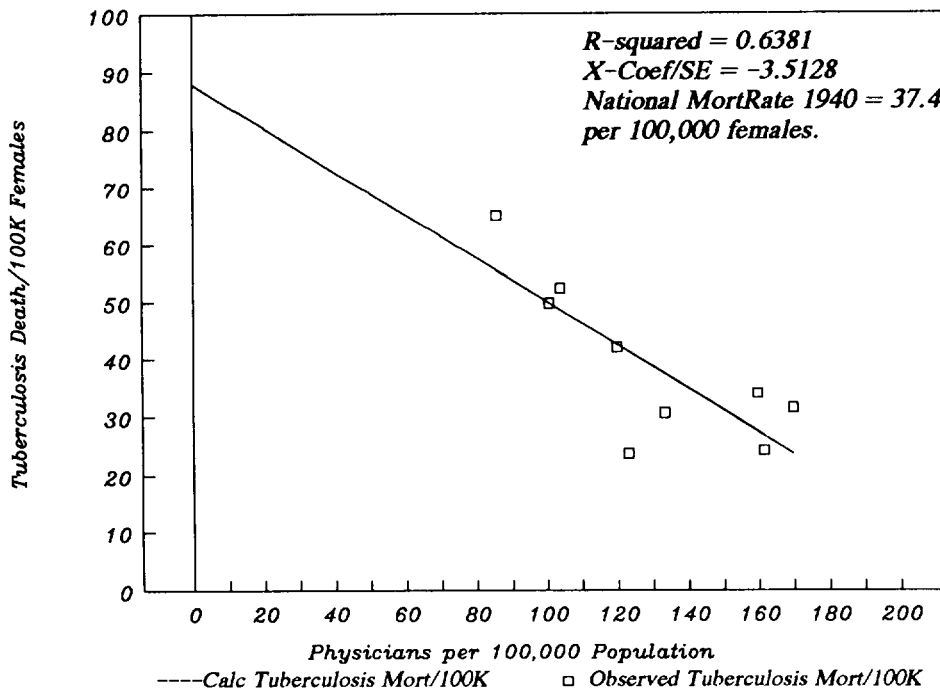


Table 36-A
Tuberculosis, All Forms (001-019): Rates by Census Divisions and National.

Annual death-rates per 100,000 are age-adjusted to the 1940 reference year. There are no exclusions by color or "race." Entries for the Nine Census Divisions are population-weighted; the averages below them are not. "National Rates" for both sexes: Deaths per 100,000 population (males + females). Males: Deaths per 100,000 male population. Females: Deaths per 100,000 female population.

| MALES | | | | | | |
|----------------------|------|------|------|------|------|------|
| Census Division | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 |
| Pacific | 59.4 | 26.1 | 6.5 | -- | -- | -- |
| New England | 43.5 | 24.6 | 7.1 | -- | -- | -- |
| West North Central | 32.2 | 16.8 | 4.9 | -- | -- | -- |
| Mid-Atlantic | 54.4 | 32.4 | 9.9 | -- | -- | -- |
| East North Central | 45.4 | 26.3 | 7.1 | -- | -- | -- |
| Mountain | 74.9 | 29.9 | 8.8 | -- | -- | -- |
| West South Central | 64.5 | 33.1 | 10.3 | -- | -- | -- |
| East South Central | 70.0 | 38.5 | 12.4 | -- | -- | -- |
| South Atlantic | 64.6 | 32.7 | 8.7 | -- | -- | -- |
| Average ALL | 56.5 | 28.9 | 8.4 | -- | -- | -- |
| Average High-Five | 47.0 | 25.2 | 7.1 | -- | -- | -- |
| Average Low-Four | 68.5 | 33.6 | 10.1 | -- | -- | -- |
| Ratio (High/Low) | 0.69 | 0.75 | 0.71 | -- | -- | -- |
| FEMALES | | | | | | |
| | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 |
| Pacific | 33.9 | 10.7 | 2.1 | -- | -- | -- |
| New England | 24.1 | 9.7 | 2.0 | -- | -- | -- |
| West North Central | 23.6 | 8.4 | 1.8 | -- | -- | -- |
| Mid-Atlantic | 31.4 | 12.7 | 3.2 | -- | -- | -- |
| East North Central | 30.5 | 11.8 | 2.4 | -- | -- | -- |
| Mountain | 42.0 | 17.4 | 3.1 | -- | -- | -- |
| West South Central | 52.3 | 21.2 | 3.8 | -- | -- | -- |
| East South Central | 65.1 | 27.4 | 5.8 | -- | -- | -- |
| South Atlantic | 49.7 | 18.7 | 3.2 | -- | -- | -- |
| Average ALL | 39.2 | 15.3 | 3.0 | -- | -- | -- |
| Average High-Five | 28.7 | 10.7 | 2.3 | -- | -- | -- |
| Average Low-Four | 52.3 | 21.2 | 4.0 | -- | -- | -- |
| Ratio (High/Low) | 0.55 | 0.50 | 0.58 | -- | -- | -- |
| NATIONAL RATES | | | | | | |
| | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 |
| Both Sexes | 45.8 | 21.6 | 5.5 | -- | -- | -- |
| Males | 54.0 | 29.0 | 8.3 | -- | -- | -- |
| Females | 37.4 | 14.5 | 2.9 | -- | -- | -- |

● - 1940, 1950, 1960: All rates come from Grove 1968, Table 67, Pages 666-669, Death-rates from "Tuberculosis, All Forms (001-019)" ICD/7.

● - Omitted data are only marginally related to examination of Hypotheses 1+2, as noted in Chapter 4, Part 2c.