

CHAPTER 32

Fatal Motor Vehicle Accidents: Relation with Medical Radiation

Box 1 of Chap. 32

Summary: Regression Outputs, Motor Vehicle Accident Death Rates.

Below are the summary-results from all the regressions of MortRates upon PhysPops. MortRates are from Table 32-A, and PhysPops are from Table 3-A.

MALES

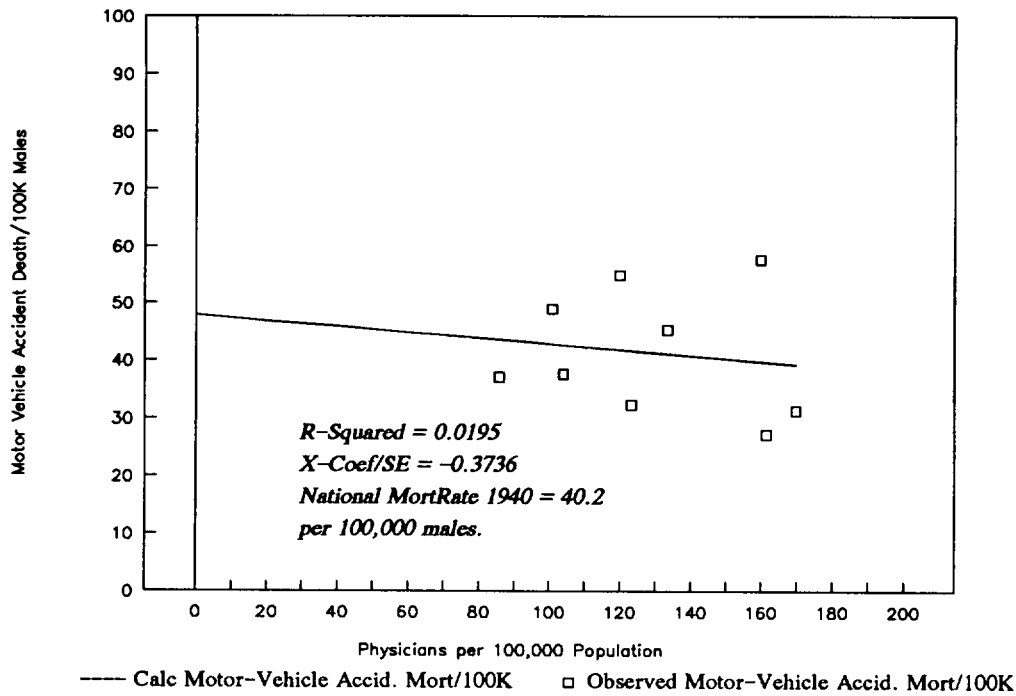
Year MortRate	Year PhysPop	R-squared	Constant	Coeff.	Std Err	Coeff/S.E
1940	1921	0.0304	25.0324	0.1212	0.2585	0.4687
1940	1923	0.0230	28.5006	0.0981	0.2420	0.4055
1940	1925	0.0113	33.2529	0.0639	0.2257	0.2830
1940	1927	0.0019	38.2431	0.0250	0.2173	0.1148
1940	1929	0.0020	38.3133	0.0246	0.2102	0.1170
1940	1931	0.0019	38.5694	0.0224	0.1917	0.1169
1940	1934	0.0020	43.8443	-0.0199	0.1687	-0.1179
1940	1936	0.0041	44.8302	-0.0276	0.1621	-0.1703
1940	1938	0.0104	46.5629	-0.0411	0.1517	-0.2711
1940	1940	0.0195	47.8900	-0.0508	0.1359	-0.3736
1950	1950	0.4761	66.1657	-0.2347	0.0931	-2.5224
1960	1960	0.5609	63.9413	-0.2422	0.0810	-2.9901
1970	1970	0.6234	58.9485	-0.1877	0.0551	-3.4039
1980	1980	0.7527	59.6950	-0.1551	0.0336	-4.6160
1990	1990	0.7311	57.2462	-0.1246	0.0286	-4.3626

FEMALES.....

Year MortRate	Year PhysPop	R-squared	Constant	Coeff.	Std Err	Coeff/S.E
1940	1921	0.1128	-1.3760	0.1046	0.1109	0.9432
1940	1923	0.0914	1.2134	0.0878	0.1046	0.8389
1940	1925	0.0503	5.0483	0.0604	0.0992	0.6090
1940	1927	0.0257	7.5560	0.0413	0.0962	0.4294
1940	1929	0.0272	7.6222	0.0411	0.0930	0.4422
1940	1931	0.0265	8.1016	0.0371	0.0849	0.4367
1940	1934	0.0059	10.7888	0.0154	0.0755	0.2035
1940	1936	0.0046	11.0689	0.0130	0.0727	0.1796
1940	1938	0.0009	12.0180	0.0055	0.0683	0.0801
1940	1940	0.0003	13.0546	-0.0027	0.0615	-0.0434
1950	1950	0.1790	17.5200	-0.0506	0.0410	-1.2352
1960	1960	0.3522	20.3931	-0.0720	0.0369	-1.9507
1970	1970	0.4324	19.9743	-0.0603	0.0261	-2.3090
1980	1980	0.6130	21.5524	-0.0544	0.0163	-3.3299
1990	1990	0.7348	21.9803	-0.0469	0.0107	-4.4040

1940 MortRate, Males, Motor-Vehicle Accident Deaths, versus
1940 PhysPop Values for the 9 Census Divisions, USA.
Not Significant

PhysPop is a surrogate for accumulated dose from medical irradiation.



Motor-Vehicle Accident Death

Figure 32-B

1940 MortRate, Females, Motor-Vehicle Accident Deaths, versus
1940 PhysPop Values for the 9 Census Divisions, USA.
Not Significant.

PhysPop is a surrogate for accumulated dose from medical irradiation

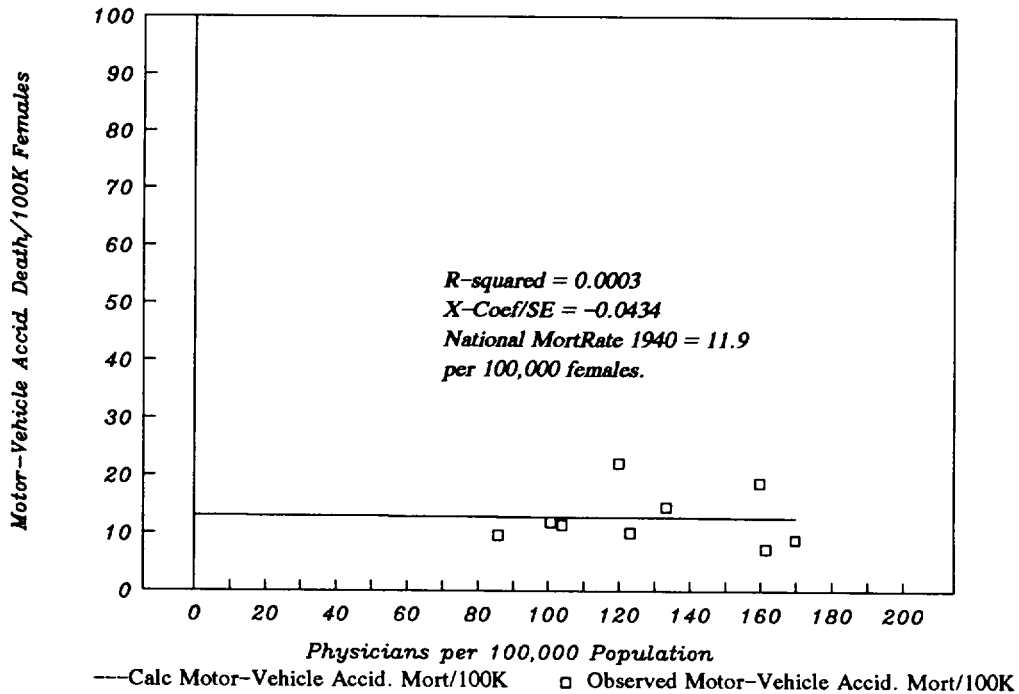


Table 32-A
Fatal Motor-Vehicle Accidents: Rates by Census Divisions and National.

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	57.6	42.1	35.2	31.9	28.5	25.1
New England	27.2	20.3	19.3	18.6	18.0	17.3
West North Central	32.3	34.7	34.9	31.9	28.9	25.9
Mid-Atlantic	31.3	22.0	19.9	19.5	19.1	18.7
East North Central	45.3	36.4	30.0	32.6	35.2	37.8
Mountain	54.9	51.4	47.9	42.2	36.5	30.7
West South Central	37.6	42.0	38.8	36.0	33.1	30.2
East South Central	37.1	41.0	41.8	40.5	39.1	37.8
South Atlantic	48.9	41.2	36.5	34.3	32.0	29.7
Average ALL	41.4	36.8	33.8	31.9	30.0	28.1
Average High-Five	38.7	31.1	27.9	26.9	25.9	25.0
Average Low-Four	44.6	43.9	41.3	38.2	35.2	32.1
Ratio (High/Low)	0.87	0.71	0.68	0.70	0.74	0.78

FEMALES

	1940	1950	1960	1970	1980	1990
Pacific	18.7	13.9	13.2	12.2	11.1	10.1
New England	7.3	5.9	6.0	6.3	6.5	6.8
West North Central	10.1	10.9	12.3	11.9	11.4	11.0
Mid-Atlantic	8.9	6.8	6.5	6.9	7.2	7.6
East North Central	14.5	11.8	10.6	10.4	10.3	10.1
Mountain	22.0	17.6	17.5	16.3	15.0	13.8
West South Central	11.4	12.6	13.4	13.0	12.6	12.2
East South Central	9.6	10.3	12.6	13.5	14.3	15.2
South Atlantic	11.9	10.9	10.8	11.3	11.8	12.3
Average ALL	12.7	11.2	11.4	11.3	11.2	11.0
Average High-Five	11.9	9.9	9.7	9.5	9.3	9.1
Average Low-Four	13.7	12.9	13.6	13.5	13.4	13.4
Ratio (High/Low)	0.87	0.77	0.72	0.70	0.69	0.68

NATIONAL RATES

	1940	1950	1960	1970	1980	1990
Both Sexes	26.1	22.6	20.9	20.0	19.1	18.2
Males	40.2	35.0	31.7	29.7	27.7	25.7
Females	11.9	10.6	10.6	10.6	10.7	10.7

- - 1940, 1950, 1960: All rates come from Grove 1968, Table 67, Pages 757-760, Death-rates from "Motor Vehicle Accidents (E810-E835)" ICD/7.
- - 1970 rates are interpolations; please see 1980, below.
- - 1980: For this particular table, the reference NatCtrHS 1980 provided no entries. The entire range of values between 1960 and 1990 is so small, that we think interpolations for both 1970 and 1980 can serve here as acceptable approximations.
- - 1990: Rates are for 1989-1991, from Monthly Vital Statistics Report, Vol.43, No.9, March 1, 1995.