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U.S. Population Mortality Improvement

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You may have seen in the newspapers last March a press release announcing that the U.S. had reached another record for life expectancy. The National Center for Health Statistics (NCHS) had just released their report on 2001 U.S. population mortality. (This report is preliminary—the final report, which includes additional detail, likely will come out this fall.)

The report is available on the internet at *www.cdc.gov/nchs/releases/03news/lifeex. htm*. I used the report to update a table on U.S. population mortality improvement rates. Some comments on the table results, focusing on the four years ending 2001, are as follows:

- There has been robust improvement (2 percent+) for males ages 55-74. This is a key age group for life insurers when you weight by expected mortality.
- Males ages 45-54 did not fare as well in 1997-2001, although they had done quite well the prior four years.
- You cannot tell much from the male ages 25-44 statistics. Looking at the entire history from 1987, you see deterioration through 1993 on account of AIDS, and then substantial improvement as the AIDS deaths reduced.
- Female mortality at older ages continues to have smaller improvements than male mortality. In addition, female mortality at ages 35-44 has deteriorated in recent years.
- You might be wondering how much impact the September 11 event had on 2001 mortality population rates. The answer is "not much." Consider that each decennial age group from 25-54 has about 40 million lives. An additional 1000 deaths in each decennial group would raise the death rate by only 2-3 per 100,000.

The table shows, for comparison, Projection Scale G, which frequently is used to project annuitant mortality. It looks not unreasonable for males, although high at younger ages. For females, Projection Scale G appears high. (In fact, when the Annuity 2000 table was developed, it was developed by taking the prior table and projecting to 2000 using Projection Scale G for males, but only half of Projection Scale G for females.) □

Annual Mortality Improvement – U.S. Population

| | Death Rates per 100,000 | | | | | | Annual Rates of Improvement | | | | | |
Age	1987	1990	1993	1997	2001	Males	1987-90	1990-93	1993-97	1997-01	1987-01	Scale G
25-34	189	204	212	163	143		-2.7%	-1.3%	5.3%	3.0%	1.6%	0.5%
35-44	290	310	329	275	259		-2.4%	-2.1%	3.9%	1.4%	0.7%	2.0%
45-54	638	610	603	548	544		1.4%	0.4%	2.2%	0.2%	1.0%	1.8%
55-64	1,626	1,553	1,480	1,343	1,192		1.5%	1.5%	2.2%	2.7%	1.7%	1.5%
65-74	3,636	3,492	3,411	3,170	2,914		1.3%	0.8%	1.7%	2.0%	1.3%	1.4%
75-84	8,206	7,889	7,700	7,055	6,842		1.3%	0.8%	2.0%	0.7%	1.1%	1.2%
						Females						
25-34	74	74	74	68	66		0.0%	0.0%	2.1%	0.6%	0.7%	1.0%
35-44	135	138	145	135	148		-0.7%	-1.7%	1.6%	-2.4	-0.7%	2.2%
45-54	367	343	334	310	316		2.1%	0.9%	1.8%	-0.5%	0.9%	2.0%
55-64	910	879	868	806	754		1.1%	0.4%	1.7%	1.6%	1.1%	1.8%
65-74	2,070	1,991	2,010	1,937	1,892		1.3%	-0.3%	0.9%	0.6%	0.6%	1.8%
75-84	5,102	4,883	4,824	4,832	4,764		1.4%	0.4%	0.0%	0.3%	0.5%	1.5%