



SOCIETY OF ACTUARIES

Article from:

Product Matters

October 2008 – Issue No. 72

U.S. Population Mortality Continues To Improve in 2006 and 2007

by Douglas Doll

The National Center For Health Statistics recently came out with preliminary 2006 U.S. population mortality statistics—showing lower mortality and a record life expectancy! Furthermore, the death count for 2007 indicates that 2007 statistics will show continued improvement.

Here is the Web site of the press release dated June 11, 2008 and the report covering the 2006 results:

<http://www.cdc.gov/nchs/pressroom/08newsreleases/mortality2006.htm>

The overall age-adjusted death rate decreased by almost 3 percent, after a smaller decrease in 2005. Below is a table I

created comparing population death rates for selected age groups and years. I calculated some annualized improvement rates for the different age groups, and also, for a mix of attained ages in a hypothetical insurance company, calculated the weighted average population death rates and improvement rates.

You might wonder why the overall population rate in 2006 decreased by almost 3 percent, when the improvements in the above table have a weighted average of only 2.0 percent—it's because ages 85-plus (not shown in the table below) improved by 4 percent, and this category is more than half the total population deaths. I note that the

Sex/Age	U.S. Death Rates per 100,000					Annual Improvement				Life Ins. Weight
	1987	1997	2004	2005	2006	2004-2005	2005-2006	1987-1997	1997-2006	
Male										
25 -34	189	163	140	143	146	-2.1%	-2.1%	1.5%	1.2%	10.0%
35 - 44	290	275	244	243	238	0.4%	2.1%	0.5%	1.6%	25.0%
45 - 54	638	548	544	548	540	-0.7%	1.5%	1.5%	0.2%	20.0%
55 - 64	1,626	1,343	1,129	1,131	1,109	-0.2%	1.9%	1.9%	2.1%	10.0%
65 - 74	3,636	3,170	2,645	2,612	2,515	1.2%	3.7%	1.4%	2.5%	2.0%
75 - 84	8,206	7,055	6,394	6,350	6,180	0.7%	2.7%	1.5%	1.5%	1.5%
Female										
25 -34	74	68	64	64	64	0.0%	0.0%	0.8%	0.7%	6.0%
35 - 44	135	135	144	144	142	0.0%	1.4%	0.0%	-0.6%	13.0%
45 - 54	367	310	314	320	317	-1.9%	0.9%	1.7%	-0.2%	8.0%
55 - 64	910	806	707	698	686	1.3%	1.7%	1.2%	1.8%	3.0%
65 - 74	2,070	1,937	1,761	1,736	1,679	1.4%	3.3%	0.7%	1.6%	1.0%
75 - 84	5,102	4,832	4,522	4,520	4,390	0.0%	2.9%	0.5%	1.1%	0.5%
Wt Avg	702	612	555	554	543	0.1%	2.0%	1.4%	1.3%	100.0%

Year	Population Death Rate Per 1,000	Population Improvement	Age-Specific Improvement
2004	8.15		
2005	8.20	-0.6%	0.1%
2006	8.08	1.5%	2.0%
2007	7.99	1.1%	???

rate for the 85-plus category (as well as for the other categories) can be influenced by whether the mix of ages within the category changes over time.

In July, the National Vital Statistics Report (Vol. 56, No.21) released the “Births, Marriages, Divorces, and Deaths: Provisional Data for 2007.” The document can be found at this Web site:

<http://www.cdc.gov/nchs/products/pubs/pubd/nvsr/nvsr.htm>

It is interesting to compare the population death rates per thousand to earlier years, and to compare the improvement to the weighted average age-specific improvement rates from the above table. This is shown in the table above.

The age-specific improvement rates are larger than the overall population rate, because the population is aging, so that we would expect an increase in the overall popu-

lation rate even if age-specific rates were unchanged. It appears from the above table that we will also have large improvements in 2007 when the age-specific rates come out several months from now, although it's always possible that all the improvement in 2007 is at ages 85-plus.

Based on the above table, it seems like a weighted average improvement of at least 1.0 percent for age-specific rates should be expected in 2007. ■



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