

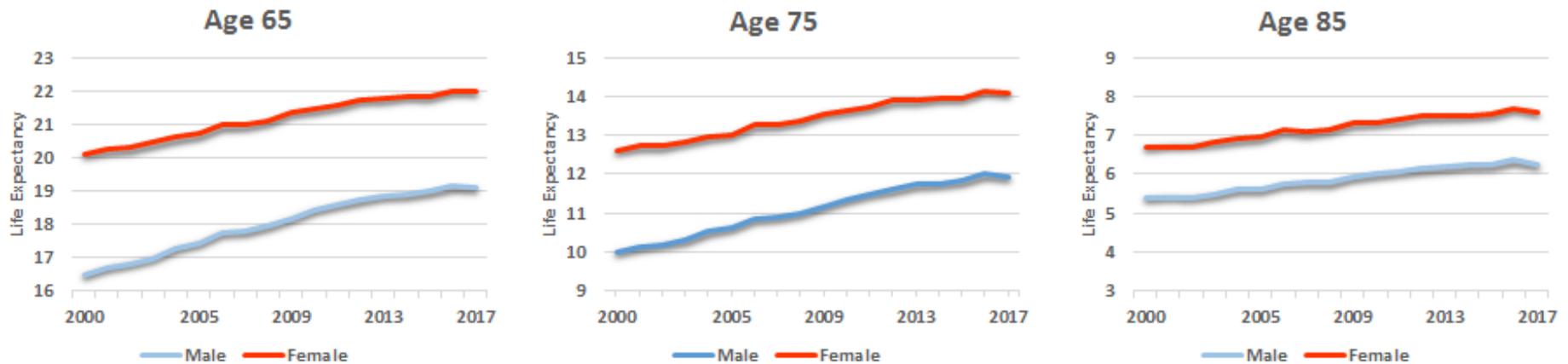


## Old Age Security (OAS) Program Mortality Experience Fact Sheet – September 2018

### Life Expectancy at Ages 65, 75 and 85

For both male and female OAS beneficiaries, life expectancy has increased since 2000. For males age 65, 75 and 85, life expectancy has increased from 16.5, 10.0 and 5.4 years in 2000 to 19.1, 12.0 and 6.3 years in 2017, respectively. Similarly, for female OAS beneficiaries age 65, 75 and 85, life expectancy has increased from 20.1, 12.6 and 6.7 years in 2000 to 22.0, 14.1 and 7.6 years in 2017, respectively.

### Life Expectancy of OAS Beneficiaries (without future mortality improvements)

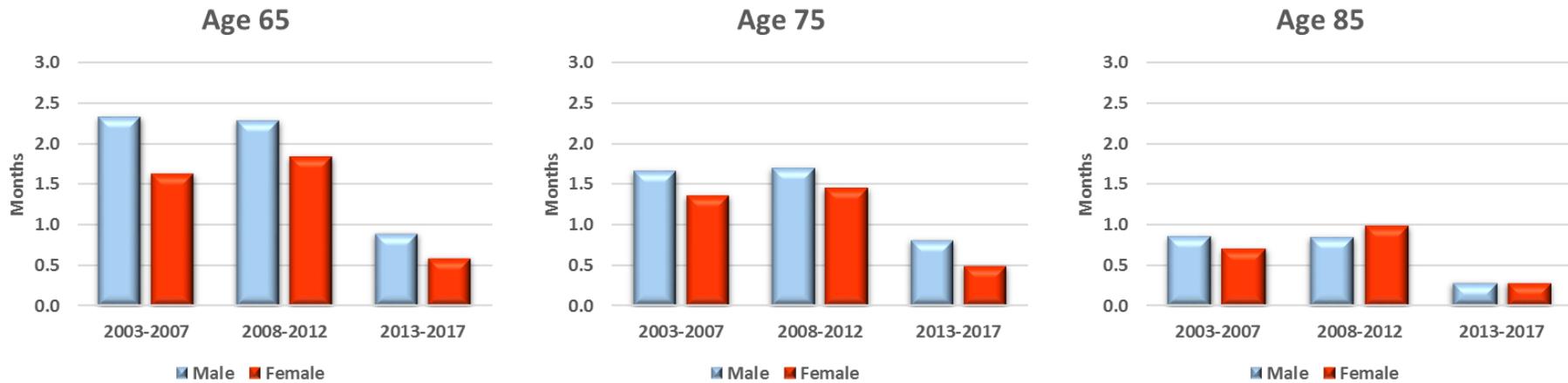




### Change in Life Expectancy at Ages 65, 75 and 85

There is a recent slowing trend in the pace of increases in life expectancy at ages 65, 75 and 85 for both males and females. Life expectancy for male OAS beneficiaries age 65 increased by an average of 2.3 months, 2.3 months and 0.9 month per year over the 5-year periods 2003-2007, 2008-2012 and 2013-2017, respectively. Further, male OAS beneficiaries age 75 experienced an average increase in life expectancy of 0.8 month per year for the 5-year period 2013-2017 which is lower than the average annual increase of 1.7 months per year for the 5-year period 2003-2007. Finally, male OAS beneficiaries age 85 experienced an average increase in life expectancy of 0.3 month per year for the 5-year period 2013-2017 which is lower than the average annual increase of 0.9 month per year for the 5-year period 2003-2007. From 2003 to 2007, female OAS beneficiaries experienced average increases in life expectancy of 1.6 months, 1.4 months and 0.7 month per year for ages 65, 75 and 85, respectively. In the more recent period 2013-2017, these annual average increases reduced to 0.6, 0.5 and 0.3 month per year respectively.

Average Annual Increase in Life Expectancy of OAS Beneficiaries (in months per year)





## Mortality Improvement Rates

Historical average annual mortality improvement rates (MIRs) measure the pace of change in mortality over time. The “improvement in mortality” indicates that mortality rates have decreased over time, which in turn has led to increased longevity. There is a decreasing trend in the average annual MIRs for all age groups over age 65. This trend is especially pronounced for male OAS beneficiaries in the 65-69 age group: average MIRs were 2.8% from 2002 to 2007, 2.9% from 2007 to 2012, and 0.1% from 2012 to 2017. Similarly, the average annual MIRs for female OAS beneficiaries age 65-69 were 1.9% from 2002 to 2007 and from 2007 to 2012, and 0.6% from 2012 to 2017.

### Average Annual Mortality Improvement Rates for OAS Beneficiaries

Males			
Age	2002-2007	2007-2012	2012-2017
65-69	2.8%	2.9%	0.1%
70-74	3.4%	2.7%	1.3%
75-79	3.0%	3.1%	1.4%
80-84	2.5%	2.5%	1.6%
85-89	2.1%	2.0%	1.0%
90+	1.1%	1.3%	0.4%

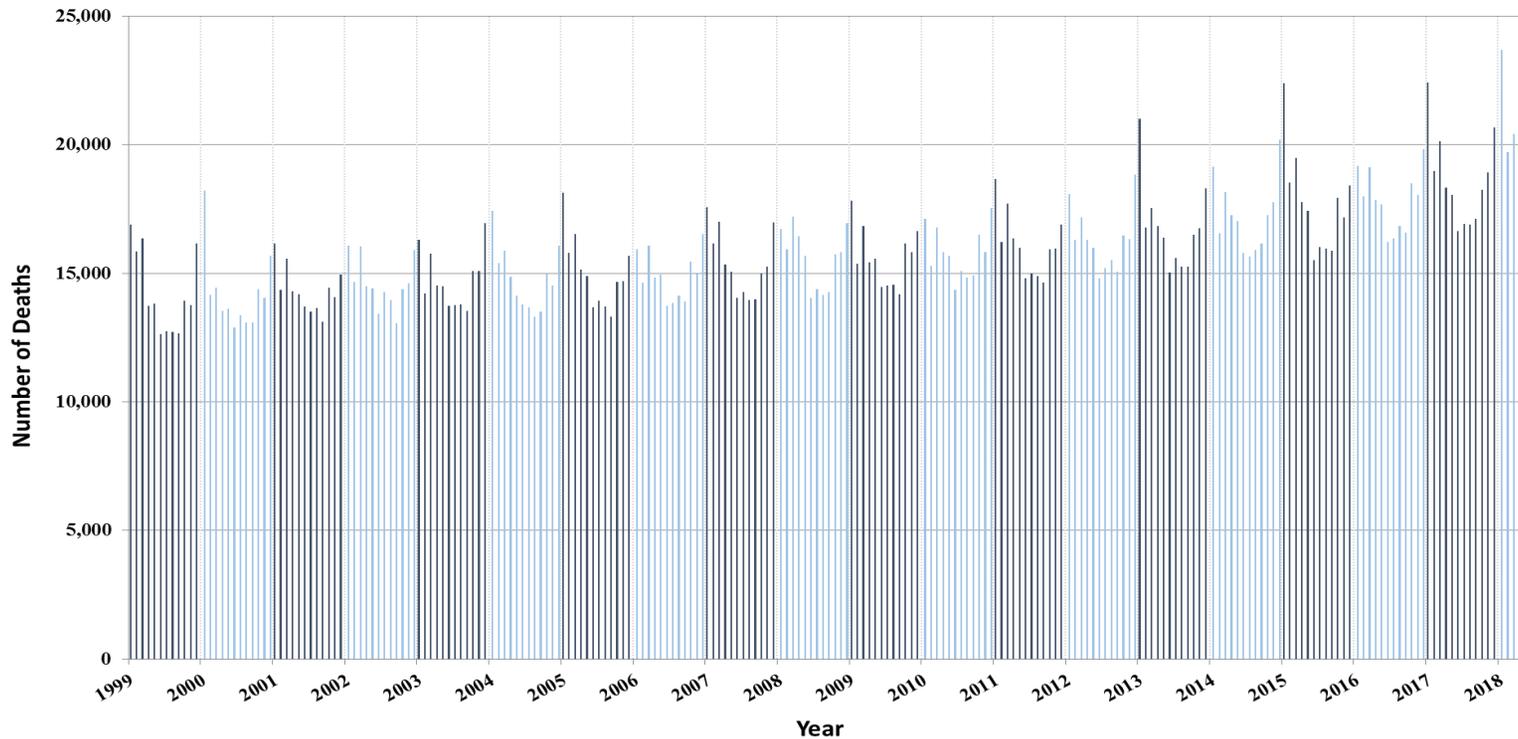
Females			
Age	2002-2007	2007-2012	2012-2017
65-69	1.9%	1.9%	0.6%
70-74	1.8%	2.3%	0.4%
75-79	2.2%	2.2%	0.5%
80-84	2.2%	1.8%	1.2%
85-89	1.8%	2.0%	1.1%
90+	1.1%	1.3%	0.4%



## Number of Monthly Deaths

The following graph shows the monthly number of deaths of OAS beneficiaries (age 65 and over) from January 1999 to May 2018. There are seasonal variations in monthly deaths with the least deaths occurring in the summer months and the most deaths occurring during the winter months. In particular, the maximum number of deaths occurred in December or January every year except for 2008 when it was in March. Overall, due to ageing of the Canadian population, the number of deaths has increased from 1999 to 2017.

**Number of Deaths per Month for OAS Beneficiaries Age 65 and over – January 1999 to May 2018**



**Data and Methodology:**

All calculations are based on the OAS program beneficiary database that was provided to the Office of the Chief Actuary by Service Canada which is the administrator of the OAS program. The historical average annual mortality improvement rates are derived using the best-fit log-linear method. (see chapter 4 of the SOA RP-2000 Mortality Tables Report, found here: <https://www.soa.org/experience-studies/2000-2004/research-rp-2000-mortality-tables/>).