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Old Age Security Program Mortality Experience

Actuarial Study No. 23

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1 Executive Summary

1.1 Purpose

This is the fourth Old Age Security (OAS) program mortality experience study published by the Office of the Chief Actuary (OCA).

The OAS pension is a monthly benefit available to most Canadians 65 years of age or older, who meet residence and legal status requirements. The OAS pension is subject to a repayment amount or recovery tax for those with income exceeding a specified level. The OAS program also includes a Guaranteed Income Supplement (GIS) and Allowance monthly benefits paid to residents of Canada who receive a full or partial OAS pension and who have little or no other income. To receive the GIS, an individual must be an OAS pensioner. There Allowance benefit is paid to those aged 60 to 64 who are either the spouses or common-law partners of GIS recipients or are widowed.

Similar to the three preceding OAS mortality studies (Actuarial Studies Nos. 5, 11, and 17), this study excludes OAS benefits paid under international social security agreements and covers only benefits paid under the domestic OAS program. As well, like in the previous studies, this study covers OAS pensioners and GIS beneficiaries.

The availability of an administrative OAS beneficiaries database provided by Service Canada allows for a more accurate measurement of the level and trend in mortality experienced by the oldest portion of the Canadian population over the period from 1 January 1999 to 31 December 2019. As the experience period considered ends in 2019, the impacts of the COVID-19 pandemic are not reflected in this study.

The longer experience period of this study (from 1999 to 2019 inclusive) relative to its predecessors provides for the observation and analysis of longer-term trends of mortality. This study accounts for over 99 million life-years of exposure and about 4 million deaths.

The OCA will use the results of this study to assess the mortality characteristics of the overall Canadian population and of OAS program beneficiaries when producing its next triennial Canada Pension Plan (CPP) and OAS program actuarial reports.

1.2 Scope

Section II describes the data and methodology used to analyze the OAS program beneficiary mortality experience. Section III presents the overall mortality experience of OAS beneficiaries. Also included in section III is a comparison with the Canadian population mortality.

A comparison of mortality rates by type of benefit is presented in Section IV, while Section V presents the level of mortality by marital status and type of benefit. Section VI presents the level of mortality by place of birth. Section VII next presents an analysis of the trends in mortality improvement rates over the experience period. A conclusion of the study then follows in Section VIII. Detailed tables are provided in the Annex of the study, and lists of the references used and contributors to the study are provided at the end.

Throughout this study, the terms “OAS” and “OAS program” are used interchangeably to refer to the OAS program. Also, all life expectancies presented in this study refer to period life expectancies (i.e., without assumed future mortality improvements). Lastly, all figures shown in the study pertain to OAS program beneficiaries aged 65 and older, unless otherwise indicated.

1.3 Main Findings

1.3.1 Life Expectancies of OAS Beneficiaries

- In 2019, the life expectancies at age 65 for OAS beneficiaries are 19.4 years for males and 22.2 years for females. These are 3.3 years and 2.3 years higher than the corresponding life expectancies observed in 1999.
- The gap in life expectancies between females and males decreased from 3.8 years in 1999 to 2.8 years in 2019.
- Older Canadians are living longer but the growth in life expectancy of one month per year over the period from 2015 to 2019 has been lower than the two months per year experienced over the previous 15 years period 2000 to 2014. Similar trends have been observed in the United States and in the United Kingdom.

1.3.2 Life Expectancies by Type of Benefit

- Over the last 20 years, life expectancy at age 65 for males has increased from 16.9 years in 1999 to 20.3 years in 2019 for those not receiving the GIS benefits and from 14.5 years in 1999 to 17.4 years in 2019 for those receiving the GIS benefit.
- In comparison, for females, life expectancy at age 65 has increased from 20.8 years in 1999 to 23.2 years in 2019 for those not receiving the GIS benefit and from 18.8 years in 1999 to 20.7 years in 2019 for those receiving the GIS benefit.
- As such, the gap in life expectancies at age 65 between beneficiaries not receiving the GIS and those receiving the benefit has increased over the period 1999 to 2019. In 1999, the differential was 2.4 years for males and 2.0 years for females, while in 2019 the differential is 2.9 years for males and 2.5 years for females.

1.3.3 Life Expectancies by Marital Status and Type of Benefit

- In 2019, the life expectancies at age 65 are 20.7 years for married males and 16.8 years for single males. The corresponding life expectancies at age 65 for married and single females are 23.6 years and 21.1 years.
- In 2019, single males experience mortality that is about 2.7 times the level of married beneficiaries at age 65. In comparison, single females experience mortality that is about 1.9 times the level of married beneficiaries.
- In 2019, for both sexes in general, single beneficiaries in receipt of the GIS have the lowest life expectancies while married beneficiaries not receiving the GIS have the highest life expectancies.

1.3.4 Life Expectancies by Place of Birth

- OAS beneficiaries born outside Canada experience lower mortality than those born in Canada. This may be explained by the “healthy immigrant effect” (Vang et al., 2015), which results from several factors, including medical and employability screening prior to entry to Canada as well as cultural and lifestyle characteristics.
- In 2019, the life expectancies at age 65 are 20.8 years for male OAS beneficiaries born outside Canada and 18.4 years for those born in Canada. The corresponding life expectancies for females at age 65 are 23.6 years and 21.4 years.

- The gap between the life expectancies at age 65 of OAS beneficiaries born outside Canada and those born in Canada has increased for both sexes over the period 1999 to 2019. In 1999, the differential by place of birth was 1.5 years for males and 0.9 of a year for females. In 2019, the differential by place of birth for both males and females is about 2.2 years.

1.3.5 Mortality Improvements

- The average annual mortality improvement rate for males in the age group 65 to 74 over the period 2000 to 2014 has been 2.7%, and this compares to a level of 1.0% over the more recent period 2015 to 2019. In comparison, for the same age group, the average annual mortality improvement rate for females has also decreased, standing at 1.9% for the 2000 to 2014 period and at 1.0% for the 2015 to 2019 period.
- For both sexes, mortality improvements for beneficiaries in receipt of the GIS have generally been lower than for beneficiaries not receiving the GIS. Over the period 2000 to 2019, for ages 65 to 74, those in receipt of the GIS experienced an average annual mortality improvement rate of 1.6% and 1.1% for males and females, respectively. These compare to average annual improvement rates of 2.5% for males and 1.8% for females not in receipt of the GIS. These improvement rates have been somewhat lower over the more recent period 2015 to 2019.
- The average annual mortality improvement rates for OAS beneficiaries are at the same levels as those derived from the general population mortality.

1.4 Conclusion

In general, this study confirms the results that were obtained by the previous OAS program beneficiary mortality studies. The analysis by type of benefit received shows that beneficiaries who do not receive the GIS experience lower mortality compared to those who receive the GIS. The analysis by marital status shows that beneficiaries who are married experience lower mortality compared to single beneficiaries. The analysis by place of birth shows that beneficiaries who were born outside Canada experience lower mortality compared to beneficiaries who were born in Canada.

The study also reveals that mortality improvement rates over the more recent period from 2015 to 2019 have been somewhat lower than improvement rates experienced over the previous 15 years period from 2000 to 2014.

2 Data and Methodology

2.1 Data Source and Validation

The main source of data for this study is an administrative seriatim (i.e., by non-identifiable individual records) OAS program beneficiaries database that was provided to the OCA by Service Canada, which is the administrator of the OAS program. The OAS database contains information on the amount of regular monthly benefits received by each OAS program beneficiary along with the associated payment status (i.e., whether in pay, suspended, or terminated) at each 31 December for years 1999 to 2019 inclusive. The OAS database allows for the identification of those receiving the GIS and Allowance benefits in addition to the OAS pension due to having no or very low income[1].

The Canada Revenue Agency (CRA) database available to the OCA was also used for this study to determine the date of death and the marital status, if that information was not available solely from the OAS database. Statistics Canada also provided general population mortality data for Canada by age and sex for individual years 1999 to 2019 based on Canada Life Tables (CLT).

Data validation was performed on all data records. The validation indicated that only a small portion of all beneficiary records (less than 0.1% of records) had incorrect or missing data, and thus needed to be discarded.

This study is based on the number of deaths and life-years of exposures determined for each class of OAS beneficiaries. This study accounts for over 99 million life-years of exposure and about 4 million deaths. For any given calendar year, the term "life-years of exposures" (or simply "exposures") at age "*x*" last birthday (i.e. attained age as at the last birthday) is defined as the amount of time for which a beneficiary was exposed to the risk of death at age "*x*" during that year. Specifically, exposures during a calendar year are measured as follows:

- For beneficiaries in pay who are age "*x*" on 1 January of a calendar year, life-years of exposures at age "*x*" are measured from January 1st to the earliest of a beneficiary's time of death or time they reach age "*x+1*".
- For beneficiaries in pay who are age "*x-1*" on 1 January of a calendar year, life-years of exposures at age "*x*" are measured from the time a beneficiary reaches age "*x*" to the earlier of the beneficiary's time of death or the end of the calendar year.
- For new beneficiaries who come into pay at age "*x*" during a given calendar year, life-years of exposures at age "*x*" are measured from the time an individual becomes a beneficiary to the earlier of the beneficiary's time of death, time they reach age "*x+1*", or the end of the calendar year.
- For new beneficiaries who come into pay at age "*x-1*" during a given calendar year, life-years of exposures at age "*x*" are measured from the time the new beneficiary reaches age "*x*" to the earlier of the beneficiary's time of death or the end of the calendar year.

Throughout this study, the terms "OAS" and "OAS program" are used interchangeably to refer to the OAS program. Also, all life expectancies presented in this study refer to period life expectancies (i.e., without assumed future mortality improvements).

1. The level of income used to determine the level of GIS and Allowance entitlements as defined under the *Old Age Security Act* excludes any benefits received from the OAS program, employment income and self-employment income up to $10,000 since July 2020, and other amounts.

2.2 Methodology used for Calculating Mortality Rates

This section provides a general overview of the methodology used in the development of the mortality rates of OAS beneficiaries over the experience periods running from 1 January 1999 to 31 December 2019.

The graduated OAS beneficiary mortality rates are derived using the following two-step process:

2.2.1 Crude Mortality Rates

For all beneficiary subclasses, the crude mortality rate for a given calendar year, age "*x*", and sex is defined as the probability that a person of age "*x*" will die between ages "*x*" and "*x+1*" during the given year. Crude mortality rates are usually calculated by simply dividing the relevant number of deaths by the number of life-years of exposures (defined above) over the given year or period. For this study, annual crude mortality rates are determined using the Product-Limit Estimator (PLE) method, also known as the Kaplan-Meier Product-Limit Estimator method by using the survival rates (see Appendix B of Actuarial Study No.11). For the overall OAS program experience, the highest ages for which the crude mortality rates were judged to be statistically credible are age 97 for males and 101 for females.

2.2.2 Graduated Mortality Rates

For a given calendar year, the OAS beneficiary crude mortality rates by year, age, sex, and various other subclasses (i.e., by type of benefit, marital status, and place of birth), were graduated by age to reflect a compromise between smoothness and fit. A Whittaker-Henderson graduation method was used to produce smoothed rates up to the highest advanced age such that the trend in mortality over that age and the previous three ages was deemed to provide the best fit for convergence to the ultimate mortality rates at age 120 of 700 deaths per 1,000 males and 650 deaths per 1,000 females.

3 OAS Beneficiary Mortality

3.1 Introduction

This section presents the overall mortality of OAS beneficiaries over the period 1999 to 2019. As was done in the previous three OAS mortality studies, the OAS benefits provided through international social security agreements have been excluded from this study.

3.2 Overall Mortality Experience (1999-2019)

3.2.1 Beneficiaries

Historical data on the number of OAS beneficiaries by age and sex are presented in Table 1. As females live longer than males, in 2019, 29% of female beneficiaries were aged 80 and over compared to 23% for males. There were over 9,800 centenarians in 2019, out of which 83% were females.

Between 1999 and 2019, the number of male beneficiaries increased by 85%, from 1.6 million in 1999 to 2.9 million in 2019. Over the same period, the number of female beneficiaries increased by 63%, from 2.1 million to 3.5 million. The steeper increase in the number of male beneficiaries can be attributed to the higher mortality improvement rates for males over that period.

Table 1 OAS Beneficiaries (as at December 31st)

	Males					
	Number			Distribution		
Age Group	1999	2009	2019	1999	2009	2019
65-69	521,861	655,116	908,908	33%	32%	31%
70-74	436,295	502,918	804,298	28%	25%	28%
75-79	321,466	402,107	541,093	20%	20%	19%
80-84	174,527	270,065	345,669	11%	13%	12%
85-89	85,757	139,362	203,740	5%	7%	7%
90-94	26,153	41,698	79,804	2%	2%	3%
95-99	4,921	8,700	17,215	0%	0%	1%
100+	523	816	1,636	0%	0%	0%
Total	1,571,503	2,020,782	2,902,363	100%	100%	100%

	Females					
	Number			Distribution		
Age Group	1999	2009	2019	1999	2009	2019
65-69	562,888	698,644	992,966	27%	27%	29%
70-74	523,488	560,828	877,935	25%	22%	25%
75-79	456,891	487,385	618,097	22%	19%	18%
80-84	296,616	391,584	438,098	14%	15%	13%
85-89	181,385	266,065	304,303	9%	10%	9%
90-94	73,457	109,634	161,967	3%	4%	5%
95-99	18,879	31,943	54,230	1%	1%	2%
100+	2,839	4,562	8,211	0%	0%	0%
Total	2,116,443	2,550,645	3,455,807	100%	100%	100%

Tables 36 to 41 in the Annex show various statistics related to OAS program beneficiaries by individual age and sex.

3.2.2 Deaths

Table 2 presents the number of deaths by age group and sex. The deaths are tabulated on an age last birthday basis. Over the period 1999 to 2019, there were 2.0 million male deaths and 2.1 million

female deaths. Of the 233,370 deaths in 2019, there were 4,092 classified as centenarians (82% being females). The median age at death of males increased by 3.0 years, from 78.8 years in 1999 to 81.8 years in 2019, while for females it increased by 2.9 years, from 83.3 to 86.2 years over the same period. Female deaths are distributed more toward the older ages compared to males, because of females' greater longevity.

Table 2 OAS Beneficiary Deaths (1999-2019)

Males

	Number				Distribution		
Age Group	1999-2019	1999	2009	2019	1999	2009	2019
65-69	234,868	11,541	10,602	13,187	13.8%	11.8%	11.6%
70-74	302,177	15,685	12,701	17,319	18.7%	14.2%	15.2%
75-79	366,639	18,546	17,369	18,640	22.1%	19.4%	16.4%
80-84	405,639	16,820	19,714	20,783	20.1%	22.0%	18.3%
85-89	360,497	13,192	17,245	22,290	15.7%	19.3%	19.6%
90-94	208,526	6,141	8,835	15,360	7.3%	9.9%	13.5%
95-99	63,435	1,714	2,718	5,478	2.0%	3.0%	4.8%
100+	9,298	217	382	754	0.3%	0.4%	0.7%
Total	1,951,079	83,856	89,566	113,811	100.0%	100.0%	100.0%
Median Age	80.8	78.8	80.9	81.8			

Females

	Number				Distribution		
Age Group	1999-2019	1999	2009	2019	1999	2009	2019
65-69	154,346	6,899	6,751	8,896	7.8%	6.8%	7.4%
70-74	212,554	10,504	9,114	12,307	11.8%	9.2%	10.3%
75-79	291,863	15,236	13,299	14,537	17.2%	13.4%	12.2%
80-84	395,191	17,560	19,279	18,600	19.8%	19.5%	15.6%
85-89	465,628	18,816	23,226	24,029	21.2%	23.5%	20.1%
90-94	388,681	13,033	17,179	24,220	14.7%	17.4%	20.3%
95-99	182,050	5,357	8,247	13,632	6.0%	8.3%	11.4%
100+	43,322	1,256	1,814	3,338	1.4%	1.8%	2.8%
Total	2,133,635	88,661	98,909	119,559	100.0%	100.0%	100.0%
Median Age	85.0	83.3	85.1	86.2			

Chart 1 shows the change in the distribution of deaths by age and sex for 1999, 2009 and 2019. It clearly illustrates that the median age at death for both males and females has increased over time as the distribution has shifted to the right. In 2019, the highest number of deaths occurred at age 88 for males and at age 90 for females, this compares to age 78 for males and age 85 for females in 1999.

Chart 1 Distribution of OAS Beneficiary Deaths (1999, 2009 and 2019)

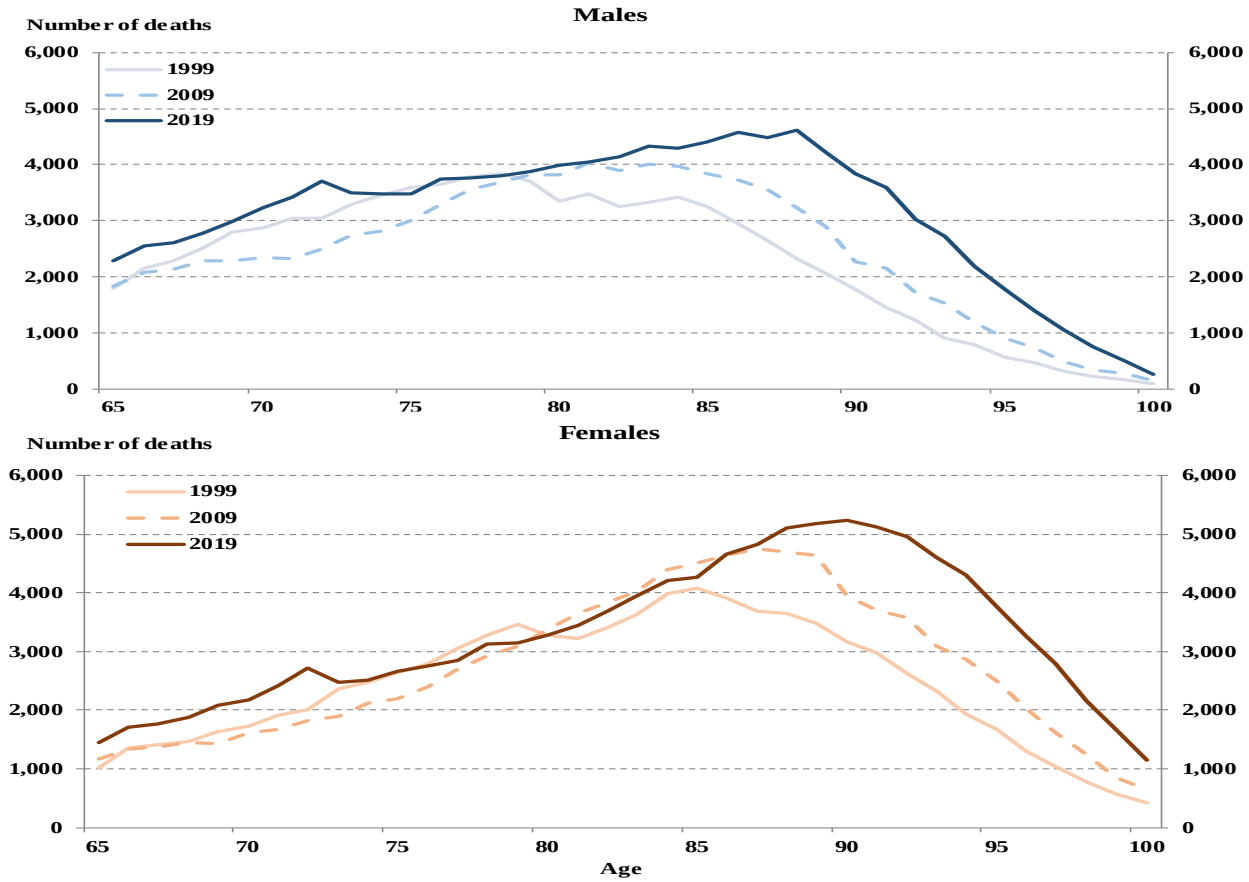


Table 3 shows, by age group and sex, a comparison of the number of deaths from the OAS database with the number of deaths reported by Statistics Canada (from the official Vital Statistics for Canada) over the period 2015 to 2019. For ages 65 to 69, the lower number of OAS deaths compared to the Vital Statistics may be explained by recipient rates for OAS benefits being less than 100%. This could be due to the fact that a portion of the population has not yet applied for OAS benefits by age 70 because of either not being eligible or opting to delay take-up of their pension in order to receive an actuarial adjustment or accumulate more years of residence and hence receive a higher pension. For ages 70 and above, the number of deaths from Vital Statistics is lower than that from the OAS database. The larger number of deaths as reported from the OAS program when compared to Vital Statistics is due to the fact that Vital Statistics exclude Canadians who die outside Canada while the OAS program includes them.

Table 3 Comparison of OAS Beneficiary Deaths with Vital Statistics Deaths (2015-2019)

	Males			Females		
Age Group	OAS	Vital Statistics(1)	Ratio OAS to Vital Statistics	OAS	Vital Statistics(1)	Ratio OAS to Vital Statistics
65-69	65,264	66,294	0.984	43,932	44,761	0.981
70-74	79,461	78,058	1.018	57,387	56,652	1.013
75-79	88,160	86,234	1.022	68,994	68,148	1.012
80-84	102,756	100,769	1.020	92,715	91,287	1.016
85-89	107,559	104,955	1.025	120,458	118,264	1.019
90+	98,368	95,226	1.033	195,200	190,449	1.025
Total	541,568	531,536	1.019	578,686	569,561	1.016

(1) The number of deaths for the period 2015 to 2019 is from official Vital Statistics from Statistics Canada, Deaths database (Table: 13-10-0709-01 formerly CANSIM 102-0503)).

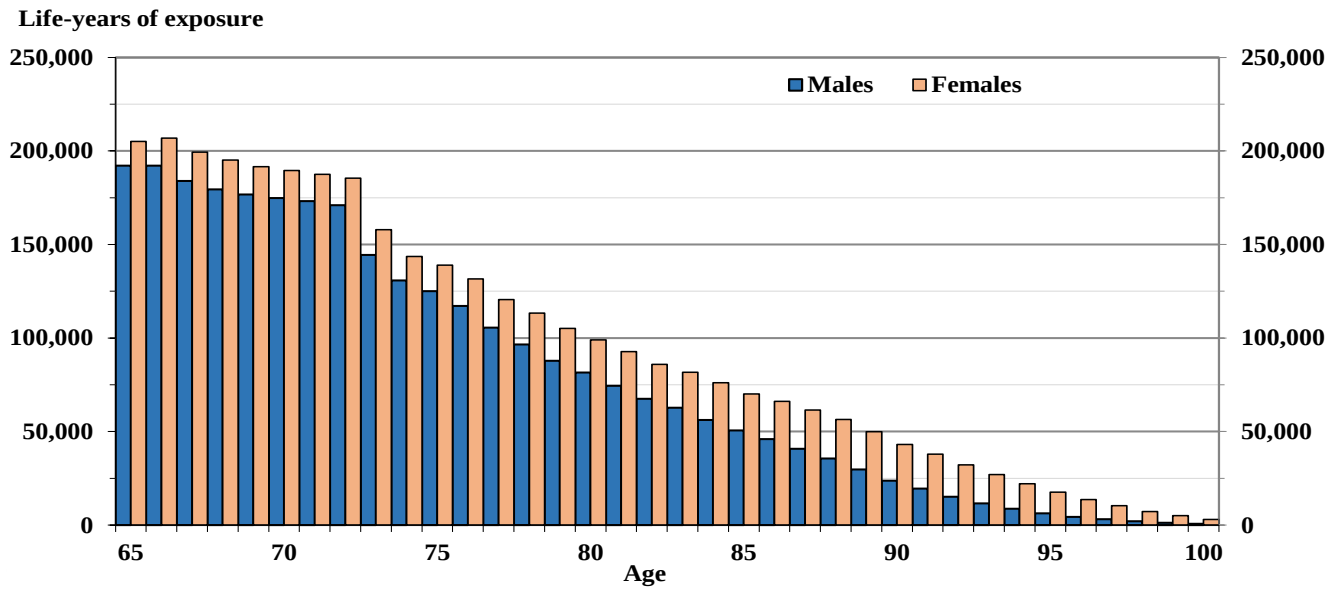
3.2.3 Exposures

Consistent with the number of beneficiaries shown in Table 1, Table 4 shows that as females live longer than males, female life-years of exposures are on average distributed more toward the advanced ages. Chart 2 shows that females have higher exposures than males at every age because of females' greater longevity.

Table 4 OAS Beneficiary Exposures (2019)

	Exposures			Distribution		
Age Group	Males	Females	Both Sexes	Males	Females	Both Sexes
65-69	924,379	998,005	1,922,384	32.0%	29.1%	30.4%
70-74	794,014	863,846	1,657,860	27.4%	25.2%	26.2%
75-79	532,144	609,320	1,141,463	18.4%	17.7%	18.0%
80-84	342,409	435,381	777,790	11.8%	12.7%	12.3%
85-89	202,631	304,147	506,778	7.0%	8.9%	8.0%
90-94	78,744	162,266	241,010	2.7%	4.7%	3.8%
95-99	16,981	53,654	70,634	0.6%	1.6%	1.1%
100+	1,609	8,131	9,739	0.1%	0.2%	0.2%
Total	2,892,910	3,434,749	6,327,658	100.0%	100.0%	100.0%

Chart 2 OAS Beneficiary Exposures (2019)



3.2.4.1 OAS Beneficiary Crude Mortality Rates by Age and Sex

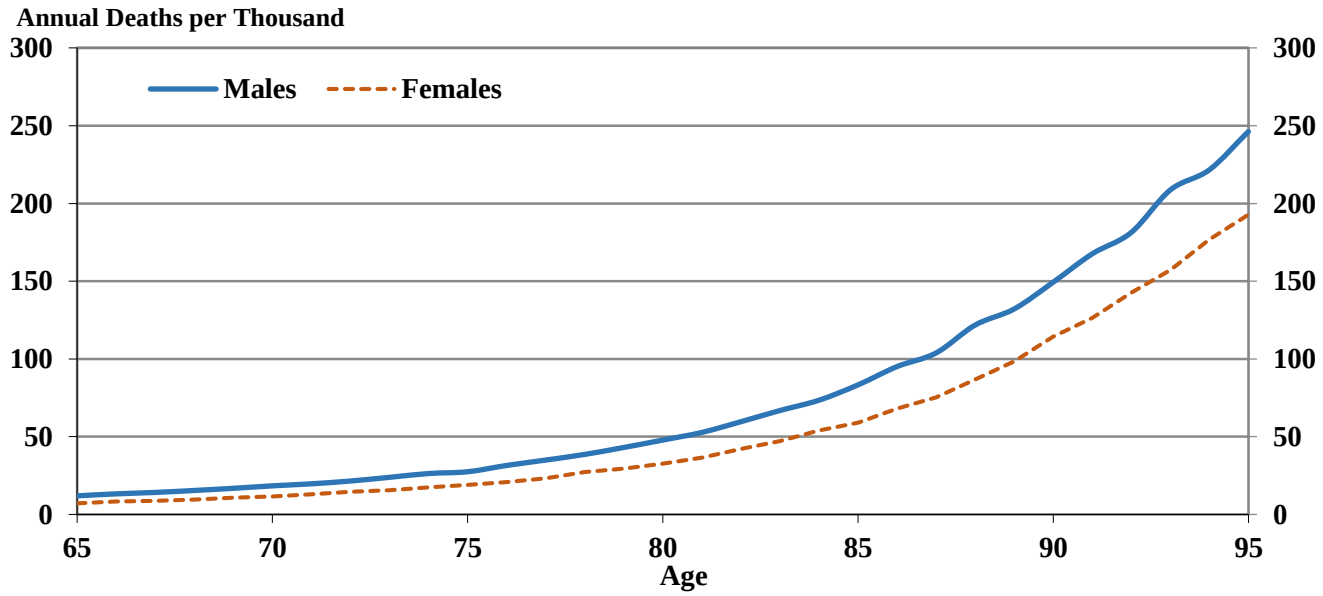
The OAS program beneficiary crude mortality rates for the year 2019 by age and sex are presented in Table 5 and Chart 3. Males experience a higher level of mortality than females at all ages.

Table 5 OAS Beneficiary Crude Mortality Rates* (2019)

Age	Annual Deaths per Thousand		
	Males	Females	Ratio Females to Males
65	11.9	7.1	0.60
70	18.3	11.4	0.63
75	27.4	18.9	0.69
80	47.7	32.6	0.68
85	83.2	59.0	0.71
90	149.3	114.2	0.77
95	246.2	192.8	0.78
100	332.1	312.5	0.94

*The highest ages for which the crude mortality rates were judged to be statistically credible are age 97 for males and 101 for females.

Chart 3 OAS Beneficiary Crude Mortality Rates (2019)



3.2.4.2 OAS Beneficiary Graduated Mortality Rates by Age and Sex (2019)

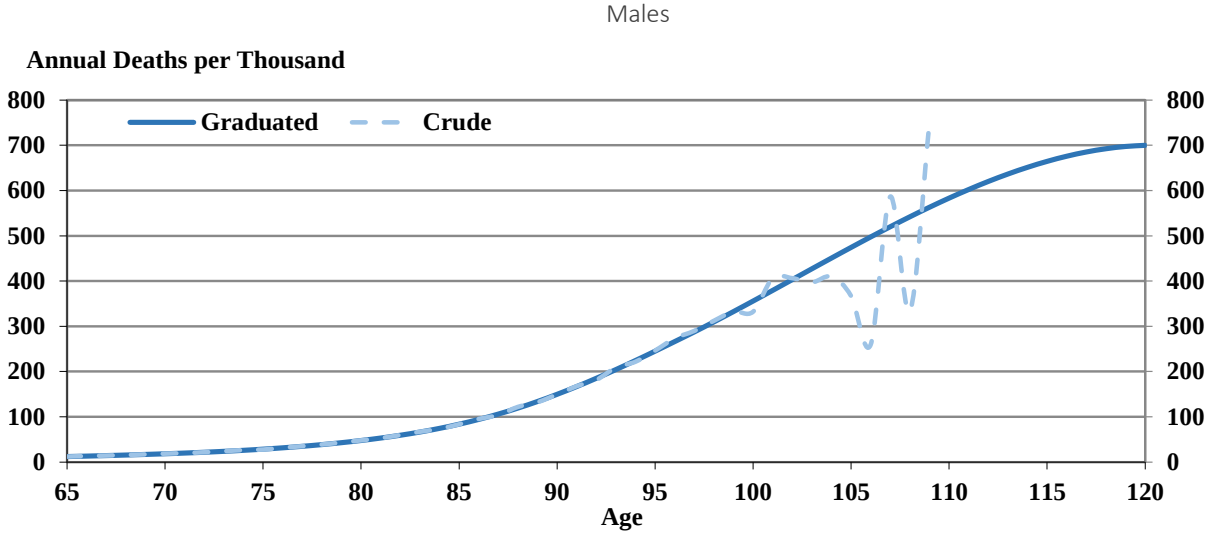
The graduated and extended mortality rates by age and sex and corresponding ratios of female to male mortality rates for the year 2019 are presented in Table 6, and a comparison of the graduated and crude mortality rates for both sexes is shown in Chart 4.

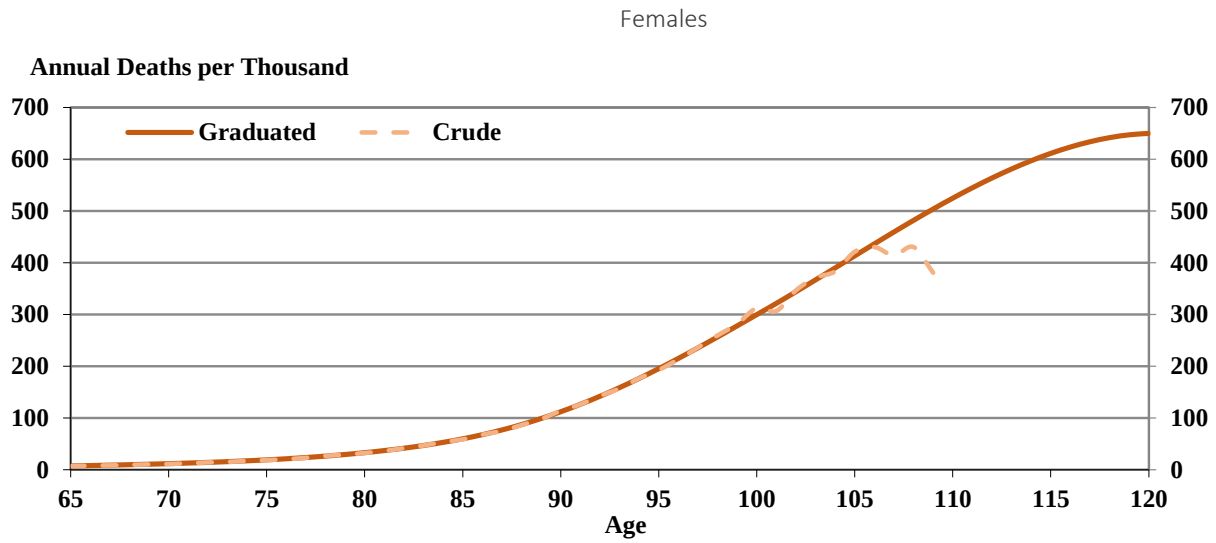
Table 6 OAS Beneficiary Graduated Mortality Rates (2019)

Age	Annual Deaths per Thousand		Ratio
	Males	Females	Females to Males
65	12.0	7.2	0.61
70	18.1	11.7	0.65
75	28.4	19.0	0.67
80	47.5	33.0	0.69
85	83.6	59.8	0.72
90	149.7	112.0	0.75
95	245.0	195.4	0.80
100	355.8	299.7	0.84
105	474.4	413.3	0.87
110	583.3	524.8	0.90
115	664.6	611.3	0.92
120	700.0	650.0	0.93

Although male OAS beneficiaries experience higher mortality than female beneficiaries, the relative gap between the male and female graduated rates declines significantly with age, with mortality between the sexes converging at the older ages. At ages 70 to 80, female OAS beneficiaries experience mortality rates that are about two thirds the rates for males. By age 95, female mortality rates are 80% of male rates.

Chart 4 OAS Beneficiary Crude* and Graduated Mortality Rates (2019)





*The highest ages for which the crude mortality rates were judged to be statistically credible are age 97 for males and 101 for females

3.3 Comparison of OAS Beneficiary and Population Mortality (2019)

Since OAS beneficiaries represent a substantial portion of the Canadian population aged 65 and over, the mortality rates of OAS beneficiaries were compared to those of the population of Canada for the year 2019. The year 2019 was the most current year for which data on population mortality from Statistics Canada Life Tables (CLT) were available at the time of this study. For comparison purposes, mortality rates for year 2019 from the Canada Life Tables were extended to age 120.

Table 7 and Chart 5 show the ratios of OAS beneficiary to population mortality rates by age and sex for the year 2019. For both sexes in 2019, OAS beneficiary mortality rates are higher than for the population at most ages. In 2019, the mortality rates of male and female OAS beneficiaries at age 65 are 11% and 5% higher, respectively, relative to corresponding mortality rates in the Canadian population. An increase in the ratios at ages 65 to 69 can be observed since 2013. These higher ratios may be the result of the implementation of the OAS deferral provision which took effect in 2012.Those more apt to defer are those with better financial situations (i.e. married and not eligible for the GIS). This results in a population of beneficiaries at ages 65 to 69 that is more skewed towards singles and those receiving GIS, both groups having higher mortality than the general population

Between ages 75 and 85, the mortality rates of OAS beneficiaries are about at the same level as those of the Canadian population. Beyond age 85, the OAS beneficiary mortality rates are slightly higher that the general population rates. At age 100, the mortality rates of male and female OAS beneficiaries is 5% and 2% higher, respectively, than the corresponding rates of the Canadian population.

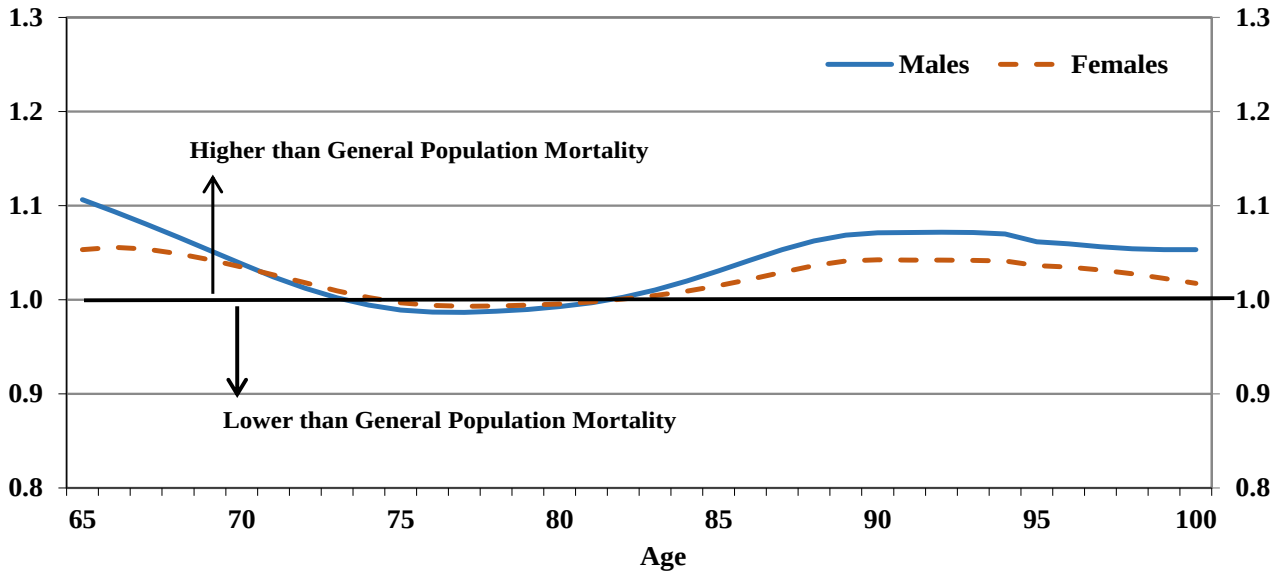
An important reason that may explain the difference between the OAS and population mortality rates is the differences between the population census survey data used in constructing Canada Life Tables and the OAS administrative data used for this study.

Table 7 OAS Beneficiary and Population Mortality Rates and Ratios (2019)

	Males			Females		
	Annual Deaths Per Thousand		Ratio OAS to Vital Statistics	Annual Deaths Per Thousand		Ratio OAS to Vital Statistics
Age	OAS	Population[1]		OAS	Population[1]	
65	12.0	10.8	1.11	7.2	6.9	1.05
70	18.1	17.5	1.04	11.7	11.3	1.03
75	28.4	28.7	0.99	19.0	19.1	1.00
80	47.5	47.8	0.99	33.0	33.1	1.00
85	83.6	81.1	1.03	59.8	58.9	1.01
90	149.7	139.7	1.07	112.0	107.5	1.04
95	245.0	230.9	1.06	195.4	188.5	1.04
100	355.8	337.8	1.05	299.7	294.5	1.02

(1) Canada Population mortality rates are based on graduated rates from the Statistics Canada's 2019 CLT Tables. OCA calculations.

Chart 5 OAS Beneficiary to Population Mortality Ratios (2019)



3.4 Life Expectancies

3.4.1 Evolution of OAS Beneficiary Life Expectancies

Table 8 shows life expectancies for OAS beneficiaries for the year 2019. The gap in life expectancies between female and male OAS beneficiaries reduces as age increases. At age 65, the gap between female and male life expectancies is 2.8 years, while the difference reduces to 0.9 of a year at age 90.

Table 8 OAS Beneficiary Life Expectancies (2019)

Age	Males	Females	Difference (Females – Males)
65	19.4	22.2	2.8
70	15.7	18.1	2.4
75	12.2	14.3	2.1
80	9.0	10.7	1.7
85	6.4	7.7	1.3
90	4.3	5.3	1.0

Table 9 shows, for both sexes, the evolution over the period 1999 to 2019 of life expectancies at age 65 of OAS beneficiaries and the general population. In general, OAS beneficiaries experience slightly

higher mortality than the general population. In 2019, life expectancies at age 65 for the Canadian population are 19.6 years for males and 22.4 years for females. These population life expectancies are 0.2 of a year higher than the life expectancies of OAS beneficiaries at age 65, which are 19.4 years for males and 22.2 years for females. As discussed above, these differences may be explained by differences in data used.

Table 9 OAS Beneficiary and Population Life Expectancies at Age 65 (1999-2019)

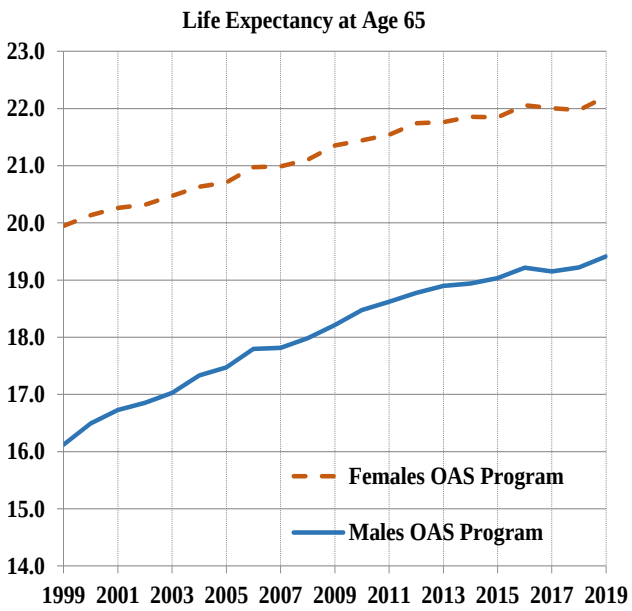
	Life Expectancy at Age 65						
	Males			Females			
Year	OAS	Population	Difference (Pop - OAS)	OAS	Population	Difference (Pop - OAS)	Difference OAS Females - Males
1999	16.1	16.4	0.3	19.9	20.1	0.2	3.8
2000	16.5	16.7	0.2	20.1	20.2	0.1	3.6
2001	16.7	17.0	0.3	20.3	20.4	0.1	3.6
2002	16.9	17.1	0.2	20.3	20.4	0.1	3.4
2003	17.0	17.3	0.3	20.5	20.6	0.1	3.5
2004	17.3	17.5	0.2	20.6	20.7	0.1	3.3
2005	17.5	17.7	0.2	20.7	20.8	0.1	3.2
2006	17.8	18.0	0.2	21.0	21.1	0.1	3.2
2007	17.8	18.0	0.2	21.0	21.1	0.1	3.2
2008	18.0	18.1	0.1	21.1	21.3	0.2	3.1
2009	18.2	18.4	0.2	21.4	21.5	0.1	3.2
2010	18.5	18.7	0.2	21.4	21.6	0.2	2.9
2011	18.6	18.8	0.2	21.5	21.8	0.3	2.9
2012	18.8	19.0	0.2	21.7	22.0	0.3	2.9
2013	18.9	19.1	0.2	21.8	21.9	0.1	2.9
2014	18.9	19.1	0.2	21.9	22.0	0.1	3.0
2015	19.0	19.2	0.2	21.8	21.9	0.1	2.8
2016	19.2	19.4	0.2	22.1	22.2	0.1	2.9
2017	19.1	19.4	0.3	22.0	22.1	0.1	2.9
2018	19.2	19.5	0.3	22.0	22.1	0.1	2.8
2019	19.4	19.6	0.2	22.2	22.4	0.2	2.8

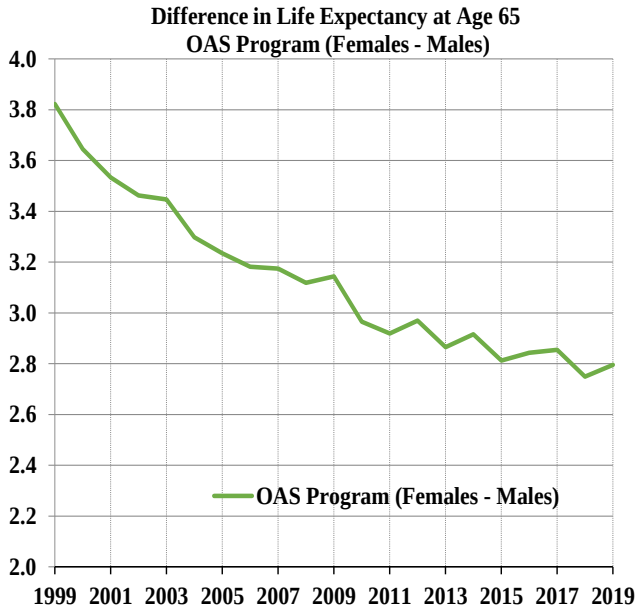
The evolution of life expectancies of OAS beneficiaries for both sexes at age 65 from 1999 to 2019 is also shown in Chart 6. In 2019, the life expectancies at age 65 for OAS beneficiaries are 19.4 years for males and 22.2 years for females. These are 3.3 years and 2.3 years, respectively, higher than the corresponding life expectancies observed in 1999. However, the pace of increase in life expectancy at age 65 has slowed down over the last decade. Between 1999 and 2009, the average overall increase, for both sexes combined, was 2 months per year (from 18.0 to 19.8 years) which compares to a lower average increase over the most recent period 2009 to 2019 of 1 month per year (from 19.8 to 20.8 years). This recent slowdown in mortality improvements[1] is analyzed further in Section VII of this study.

The gap in life expectancies between females and males has decreased from 3.8 years in 1999 to 2.8 years in 2019, with most of the decrease attributed to years prior to 2009 when males have experienced much higher mortality improvements than females.

[1] This recent slowdown in mortality improvements has also been observed in other countries. (See: Continuous Mortality Investigation Projections Committee, 2015, Raleigh, 2019, and Zhang et al., 2019).

Chart 6 Evolution of OAS Beneficiary Life Expectancies at Age 65 (1999-2019)





4 OAS Beneficiary Mortality by Type of Benefit

4.1 Introduction

This section presents the results of analysis on the mortality of OAS program beneficiaries by type of benefit defined by whether an OAS pensioner receives or not the income-tested GIS benefit.

4.2 Mortality Experience by Type of Benefit (2019)

4.2.1 Beneficiaries by Type of Benefit

The number of beneficiaries by age, sex, and type of benefit received in 2019 is presented in Table 10. In aggregate for all age groups, in 2019, the proportion of male beneficiaries receiving the GIS was 29% compared to 36% of female beneficiaries. This is consistent with the fact that females have on average lower income than males. The differential in the proportion of male and female beneficiaries receiving the GIS increases at the older ages. For the age group 65 to 69, the proportion of males with the GIS is 25% compared to 27% for females, while for the age group 90 to 94, the corresponding proportions are 35% and 52%.

Table 10 Beneficiaries by Type of Benefit (as at December 31, 2019)

	Males			Females		
Age Group	Without GIS	With GIS	Proportion with GIS	Without GIS	With GIS	Proportion with GIS
65-69	682,829	226,079	25%	726,171	266,795	27%
70-74	580,581	223,717	28%	588,328	289,607	33%
75-79	376,406	164,687	30%	382,273	235,824	38%
80-84	228,525	117,144	34%	245,645	192,453	44%
85-89	132,478	71,262	35%	159,541	144,762	48%
90-94	51,493	28,311	35%	78,468	83,499	52%
95-99	11,034	6,181	36%	24,096	30,134	56%
100+	877	759	46%	2,781	5,430	66%
Total	2,064,223	838,140	29%	2,207,303	1,248,504	36%

Tables 42 to 48 in the Annex show various statistics related to the OAS program by individual age, sex, and type of benefit.

4.2.1.1 Deaths by Type of Benefit

Table 11 presents the number of deaths of OAS beneficiaries by age, sex, and type of benefit in 2019. In aggregate for all age groups, the proportion of males with the GIS at death is 39% compared to 52% for females. This reflects that on average females live longer than males and that an increasing proportion of females receive the GIS as age advances. For the age group 65 to 69, the proportion of males who were receiving the GIS at death is 40% compared to 43% for females. For the age group 90 to 94, the corresponding proportions are 37% and 54%.

Table 11 Deaths by Type of Benefit (2019)

	Males			Females		
Age Group	Without GIS	With GIS	Proportion with GIS	Without GIS	With GIS	Proportion with GIS
65-69	7,925	5,262	40%	5,057	3,839	43%
70-74	10,175	7,144	41%	6,556	5,751	47%
75-79	10,986	7,654	41%	7,384	7,153	49%
80-84	12,433	8,350	40%	9,151	9,449	51%
85-89	13,868	8,422	38%	11,407	12,622	53%
90-94	9,676	5,684	37%	11,198	13,022	54%
95-99	3,546	1,932	35%	5,858	7,774	57%
100+	408	346	46%	1,126	2,212	66%
Total	69,017	44,794	39%	57,737	61,822	52%

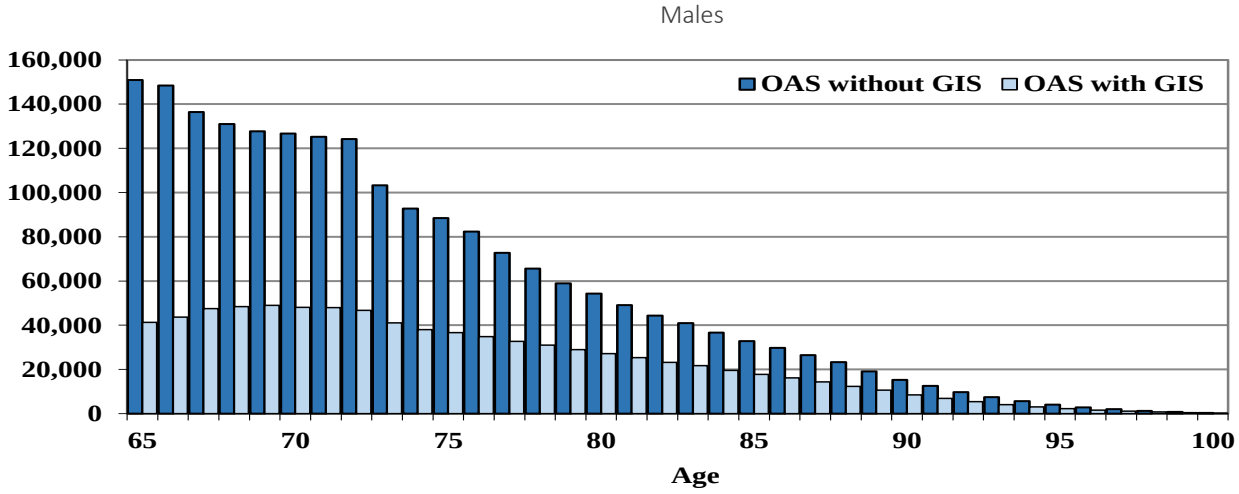
4.2.1.2 Exposures by Type of Benefit

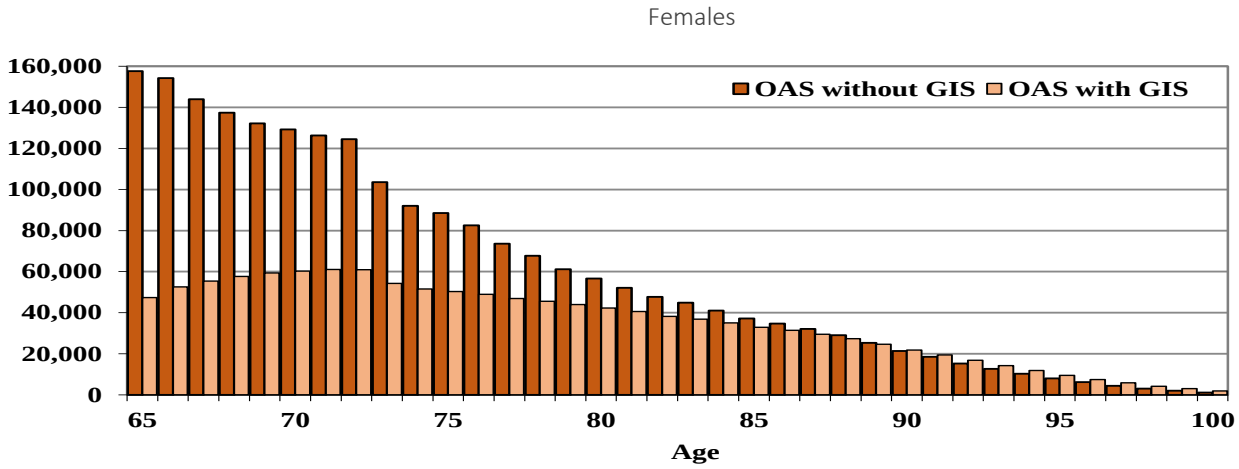
Table 12 shows that exposures by age group, sex, and type of benefit are consistent with the distribution of beneficiaries shown in Table 10. In general, female exposures exceed that of males for each type of benefit because of females' greater longevity. The age structure of the amount of exposures by type of OAS benefit received in 2019 for each sex is shown in Chart 7.

Table 12 Exposures by Type of Benefit (2019)

	Males			Females		
Age Group	Without GIS	With GIS	Proportion with GIS	Without GIS	With GIS	Proportion with GIS
65-69	694,596	229,783	25%	725,629	272,376	27%
70-74	572,163	221,851	28%	575,665	288,181	33%
75-79	368,049	164,095	31%	373,577	235,743	39%
80-84	225,411	116,998	34%	242,322	193,060	44%
85-89	131,457	71,173	35%	158,406	145,741	48%
90-94	50,757	27,988	36%	78,072	84,194	52%
95-99	10,865	6,116	36%	23,626	30,027	56%
100+	869	740	46%	2,761	5,369	66%
Total	2,054,167	838,743	29%	2,180,057	1,254,692	37%

Chart 7 Exposures by Type of Benefit (2019)





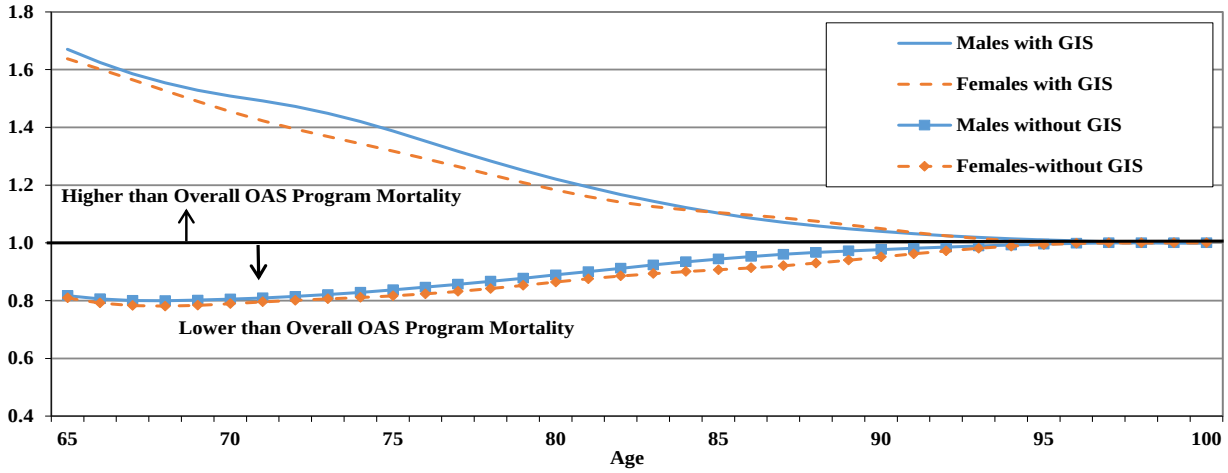
4.2.1.3 Graduated Mortality Rates by Type of Benefit

A comparison of mortality rates by type of benefit received is shown in Table 13 and Chart 8. Those beneficiaries not in receipt of the GIS experience lower mortality compared to overall OAS beneficiaries, while those who receive the GIS experience higher mortality. In 2019, GIS beneficiaries aged 65 experienced mortality that is 67% higher than the overall OAS population and about twice the level of those not receiving the GIS. In comparison, beneficiaries not receiving the GIS, aged 65, experienced mortality that is about 18% lower than the overall OAS population. In both cases however, there is convergence to the overall OAS program mortality as age increases.

Table 13 Graduated Mortality Rates and Ratios by Type of Benefit (2019)

		Males				
Age	Overall OAS (annual deaths per thousand)	Without GIS (annual deaths per thousand)	Ratio without GIS to Overall	With GIS (annual deaths per thousand)	Ratio with GIS to Overall	Ratio With to Without GIS
65	12.0	9.8	0.82	20.0	1.67	2.04
70	18.1	14.6	0.81	27.4	1.51	1.87
75	28.4	23.8	0.84	39.4	1.39	1.66
80	47.5	42.2	0.89	58.0	1.22	1.37
85	83.6	78.9	0.94	92.2	1.10	1.17
90	149.7	146.2	0.98	155.6	1.04	1.06
95	245.0	244.0	1.00	247.6	1.01	1.01
100	355.8	355.8	1.00	355.8	1.00	1.00
		Females				
Age	Overall OAS (annual deaths per thousand)	Without GIS (annual deaths per thousand)	Ratio without GIS to Overall	With GIS (annual deaths per thousand)	Ratio with GIS to Overall	Ratio With to Without GIS
65	7.2	5.9	0.81	11.9	1.64	2.02
70	11.7	9.2	0.79	17.0	1.45	1.84
75	19.0	15.6	0.82	25.1	1.32	1.61
80	33.0	28.5	0.86	39.0	1.18	1.37
85	59.8	54.2	0.91	66.0	1.10	1.22
90	112.0	106.6	0.95	117.6	1.05	1.10
95	195.4	194.2	0.99	195.9	1.00	1.01
100	299.7	299.7	1.00	300.0	1.00	1.00

Chart 8 OAS Beneficiary Mortality Ratios by Type of Benefit (2019)



4.3 Life Expectancies by Type of Benefit

4.3.1 Comparison of Life Expectancies by Age, Sex, and Type of Benefit (2019)

Table 14 shows life expectancies for beneficiaries by age, sex, and type of benefit received. In 2019, the life expectancy at age 65 for males not receiving the GIS was 20.3 years compared to 17.4 years for those receiving the GIS. The corresponding life expectancies at age 65 for females are 23.2 years and 20.7 years. For both sexes, the difference in life expectancies between those without and with the GIS reduces as age increases.

Table 14 Life Expectancies by Type of Benefit (2019)

	Males				Females			
Age	Overall OAS	Without GIS	With GIS	Difference	Overall OAS	Without GIS	With GIS	Difference
65	19.4	20.3	17.4	2.9	22.2	23.2	20.7	2.5
70	15.7	16.4	14.2	2.2	18.1	18.9	17.0	1.9
75	12.2	12.7	11.2	1.5	14.3	14.9	13.5	1.4
80	9.0	9.3	8.5	0.8	10.7	11.1	10.3	0.8
85	6.4	6.5	6.2	0.3	7.7	7.9	7.5	0.4
90	4.3	4.4	4.2	0.2	5.3	5.3	5.2	0.1

4.3.2 Evolution of Life Expectancies by Type of Benefit

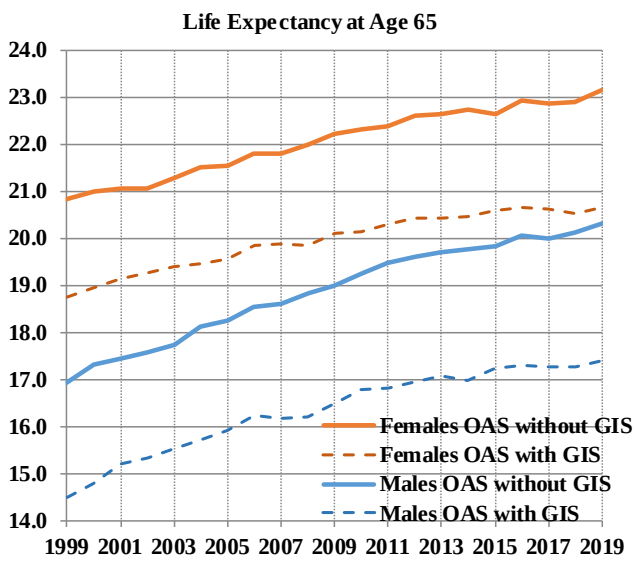
Table 15 and Chart 9 show the evolution of life expectancies at age 65 by type of benefit over the period 1999 to 2019. Over the period, low-income male beneficiaries (those receiving the GIS) have seen their life expectancy increase by about 2.9 years, while those with higher-income (not receiving the GIS) saw their life expectancy increase by 3.4 years. For females, the corresponding increases in life expectancy are about 1.9 years for those receiving the GIS compared to 2.4 years for those not receiving the benefit.

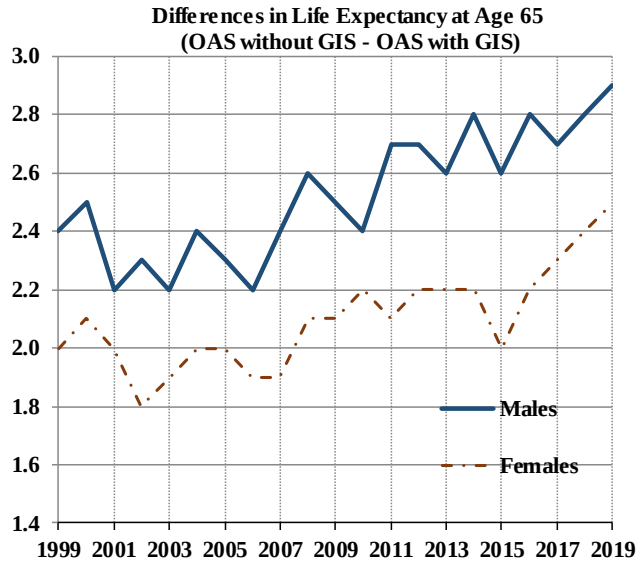
As a result, the difference in life expectancies at age 65 between beneficiaries not receiving the GIS and those in receipt of the benefit has shown an overall small, gradual increase over the period for both sexes. For males, the differential between those without and with the GIS increased overall from about 2.4 years in 1999 to 2.9 years in 2019. For females, the corresponding differential increased overall from about 2.0 to 2.5 years.

Table 15 Evolution of Life Expectancies at Age 65 by Type of Benefit (1999-2019)

	Males				Females			
Year	Overall OAS	Without GIS	With GIS	Difference (Without – With GIS)	Overall OAS	Without GIS	With GIS	Difference (Without – With GIS)
1999	16.1	16.9	14.5	2.4	19.9	20.8	18.8	2.0
2000	16.5	17.3	14.8	2.5	20.1	21.0	18.9	2.1
2001	16.7	17.4	15.2	2.2	20.3	21.1	19.1	2.0
2002	16.9	17.6	15.3	2.3	20.3	21.1	19.3	1.8
2003	17.0	17.7	15.5	2.2	20.5	21.3	19.4	1.9
2004	17.3	18.1	15.7	2.4	20.6	21.5	19.5	2.0
2005	17.5	18.2	15.9	2.3	20.7	21.6	19.6	2.0
2006	17.8	18.5	16.3	2.2	21.0	21.8	19.9	1.9
2007	17.8	18.6	16.2	2.4	21.0	21.8	19.9	1.9
2008	18.0	18.8	16.2	2.6	21.1	22.0	19.9	2.1
2009	18.2	19.0	16.5	2.5	21.4	22.2	20.1	2.1
2010	18.5	19.2	16.8	2.4	21.4	22.3	20.1	2.2
2011	18.6	19.5	16.8	2.7	21.5	22.4	20.3	2.1
2012	18.8	19.6	16.9	2.7	21.7	22.6	20.4	2.2
2013	18.9	19.7	17.1	2.6	21.8	22.6	20.4	2.2
2014	18.9	19.8	17.0	2.8	21.9	22.7	20.5	2.2
2015	19.0	19.8	17.2	2.6	21.8	22.6	20.6	2.0
2016	19.2	20.1	17.3	2.8	22.1	22.9	20.7	2.2
2017	19.1	20.0	17.3	2.7	22.0	22.9	20.6	2.3
2018	19.2	20.1	17.3	2.8	22.0	22.9	20.5	2.4
2019	19.4	20.3	17.4	2.9	22.2	23.2	20.7	2.5

Chart 9 Evolution of Life Expectancies at Age 65 by Type of Benefit (1999-2019)





5 OAS Beneficiary Mortality by Marital Status and Type of Benefit

5.1 Introduction

This section presents the results of analysis on the mortality of OAS program beneficiaries by marital status and type of benefit.

5.2 Mortality Experience by Marital Status and Type of Benefit for Year 2019

5.2.1 Beneficiaries by Marital Status and Type of Benefit

The number of beneficiaries by age, sex, marital status, and type of benefit in 2019 is presented in Table 16. In aggregate for all age groups, the proportion of male beneficiaries without the GIS who are married is 77% compared to 56% for those with GIS benefits. Overall, the proportion of female beneficiaries without the GIS who are married is 59% compared to 30% for those with GIS benefits.

For all age groups and both sexes, those with the GIS are more likely to be single than those without the GIS, especially at the younger ages. As well, for all age groups and both benefit types, females are more likely to be single compared to males, especially at the older ages due to females' greater longevity.

Table 16 Beneficiaries by Marital Status and Type of Benefit (as at December 31st 2019)

	Males									
	Overall OAS		Without GIS				With GIS			
Age Group	Married	Single	Married	Single	%Married	%Single	Married	Single	%Married	%Single
65-69	645,595	263,313	530,204	152,625	78%	22%	115,391	110,688	51%	49%
70-74	588,650	215,648	464,227	116,354	80%	20%	124,423	99,294	56%	44%
75-79	395,828	145,265	297,648	78,758	79%	21%	98,180	66,507	60%	40%
80-84	242,807	102,862	171,052	57,473	75%	25%	71,755	45,389	61%	39%
85-89	127,986	75,754	87,176	45,302	66%	34%	40,810	30,452	57%	43%
90-94	40,199	39,605	26,661	24,832	52%	48%	13,538	14,773	48%	52%
95-99	6,122	11,093	3,989	7,045	36%	64%	2,133	4,048	35%	65%
100+	362	1,274	204	673	23%	77%	158	601	21%	79%
Total	2,047,549	854,814	1,581,161	483,062	77%	23%	466,388	371,752	56%	44%

	Females									
	Overall OAS		Without GIS				With GIS			
Age Group	Married	Single	Married	Single	%Married	%Single	Married	Single	%Married	%Single
65-69	622,085	370,881	512,380	213,791	71%	29%	109,705	157,090	41%	59%
70-74	507,407	370,528	395,112	193,216	67%	33%	112,295	177,312	39%	61%
75-79	304,267	313,830	224,904	157,369	59%	41%	79,363	156,461	34%	66%
80-84	161,442	276,656	112,468	133,177	46%	54%	48,974	143,479	25%	75%
85-89	68,518	235,785	46,777	112,764	29%	71%	21,741	123,021	15%	85%
90-94	17,080	144,887	11,593	66,875	15%	85%	5,487	78,012	7%	93%
95-99	2,111	52,119	1,489	22,607	6%	94%	622	29,512	2%	98%
100+	98	8,113	70	2,711	3%	97%	28	5,402	1%	99%
Total	1,683,008	1,772,799	1,304,793	902,510	59%	41%	378,215	870,289	30%	70%

Tables 49 to 64 in the Annex show various statistics related to the OAS program by individual age, sex, marital status, and type of benefit.

5.2.2 Deaths by Marital Status and Type of Benefit

Table 17 shows that as females live longer than males, the probability of being single at death is higher for females than males. There is also variation by age group, marital status, and type of benefit as to being single at death. For example, for the age group 85 to 89, 41% of males without the GIS were single at death compared to 51% of those in receipt of the GIS. For females in the same age group, 77% without the GIS were single at death, compared to 88% of those with the GIS.

Table 17 Deaths by Marital Status and Type of Benefit (2019)

	Males									
	Overall OAS		Without GIS				With GIS			
Age Group	Married	Single	Married	Single	%Married	%Single	Married	Single	%Married	%Single
65-69	6,695	6,492	5,058	2,867	64%	36%	1,637	3,625	31%	69%
70-74	9,870	7,449	7,106	3,069	70%	30%	2,764	4,380	39%	61%
75-79	11,255	7,385	7,609	3,377	69%	31%	3,646	4,008	48%	52%
80-84	12,690	8,093	8,367	4,066	67%	33%	4,323	4,027	52%	48%
85-89	12,283	10,007	8,174	5,694	59%	41%	4,109	4,313	49%	51%
90-94	6,832	8,528	4,424	5,252	46%	54%	2,408	3,276	42%	58%
95-99	1,826	3,652	1,191	2,355	34%	66%	635	1,297	33%	67%
100+	163	591	95	313	23%	77%	68	278	20%	80%
Total	61,614	52,197	42,024	26,993	61%	39%	19,590	25,204	44%	56%

	Females									
	Overall OAS		Without GIS				With GIS			
Age Group	Married	Single	Married	Single	%Married	%Single	Married	Single	%Married	%Single
65-69	4,169	4,727	3,064	1,993	61%	39%	1,105	2,734	29%	71%
70-74	5,437	6,870	3,853	2,703	59%	41%	1,584	4,167	28%	72%
75-79	5,465	9,072	3,632	3,752	49%	51%	1,833	5,320	26%	74%
80-84	5,311	13,289	3,347	5,804	37%	63%	1,964	7,485	21%	79%
85-89	4,229	19,800	2,679	8,728	23%	77%	1,550	11,072	12%	88%
90-94	2,097	22,123	1,381	9,817	12%	88%	716	12,306	5%	95%
95-99	464	13,168	301	5,557	5%	95%	163	7,611	2%	98%
100+	24	3,314	20	1,106	2%	98%	4	2,208	0%	100%
Total	27,196	92,363	18,277	39,460	32%	68%	8,919	52,903	14%	86%

5.2.3 Exposures by Marital Status and Type of Benefit

Table 18 shows the distributions of the exposures for the year 2019, by age group, sex, marital status, and type of benefit. Again, as females generally live longer than males, the proportion of exposures related to single rather than married beneficiaries is higher for females than for males for both benefit types, especially at the advanced ages. The distributions in Table 18 are consistent with those in Table 16, and as such, the other observations made earlier for Table 16 apply here as well.

Table 18 Exposures by Marital Status and Type of Benefit (2019)

	Males									
	Overall OAS		Without GIS				With GIS			
Age Group	Married	Single	Married	Single	%Married	%Single	Married	Single	%Married	%Single
65-69	657,959	266,421	540,429	154,168	78%	22%	117,530	112,253	51%	49%
70-74	580,260	213,754	456,924	115,240	80%	20%	123,337	98,514	56%	44%
75-79	387,636	144,508	289,712	78,336	79%	21%	97,923	66,172	60%	40%
80-84	238,240	104,168	166,973	58,438	74%	26%	71,267	45,731	61%	39%
85-89	124,871	77,760	84,855	46,603	65%	35%	40,016	31,157	56%	44%
90-94	38,473	40,272	25,432	25,324	50%	50%	13,040	14,947	47%	53%
95-99	5,870	11,110	3,826	7,039	35%	65%	2,044	4,071	33%	67%
100+	344	1,265	195	673	23%	77%	148	592	20%	80%
Total	2,033,652	859,258	1,568,346	485,821	76%	24%	465,306	373,437	55%	45%
	Females									
	Overall OAS		Without GIS				With GIS			
Age Group	Married	Single	Married	Single	%Married	%Single	Married	Single	%Married	%Single
65-69	620,482	377,523	509,314	216,314	70%	30%	111,168	161,208	41%	59%
70-74	493,726	370,119	383,177	192,488	67%	33%	110,550	177,631	38%	62%
75-79	293,925	315,394	216,015	157,562	58%	42%	77,910	157,833	33%	67%
80-84	154,669	280,712	107,287	135,035	44%	56%	47,382	145,678	25%	75%
85-89	64,742	239,405	44,081	114,325	28%	72%	20,661	125,080	14%	86%
90-94	15,809	146,456	10,748	67,323	14%	86%	5,061	79,133	6%	94%
95-99	1,937	51,717	1,369	22,257	6%	94%	567	29,460	2%	98%
100+	85	8,045	60	2,701	2%	98%	25	5,344	0%	100%
Total	1,645,376	1,789,372	1,272,052	908,005	58%	42%	373,324	881,367	30%	70%

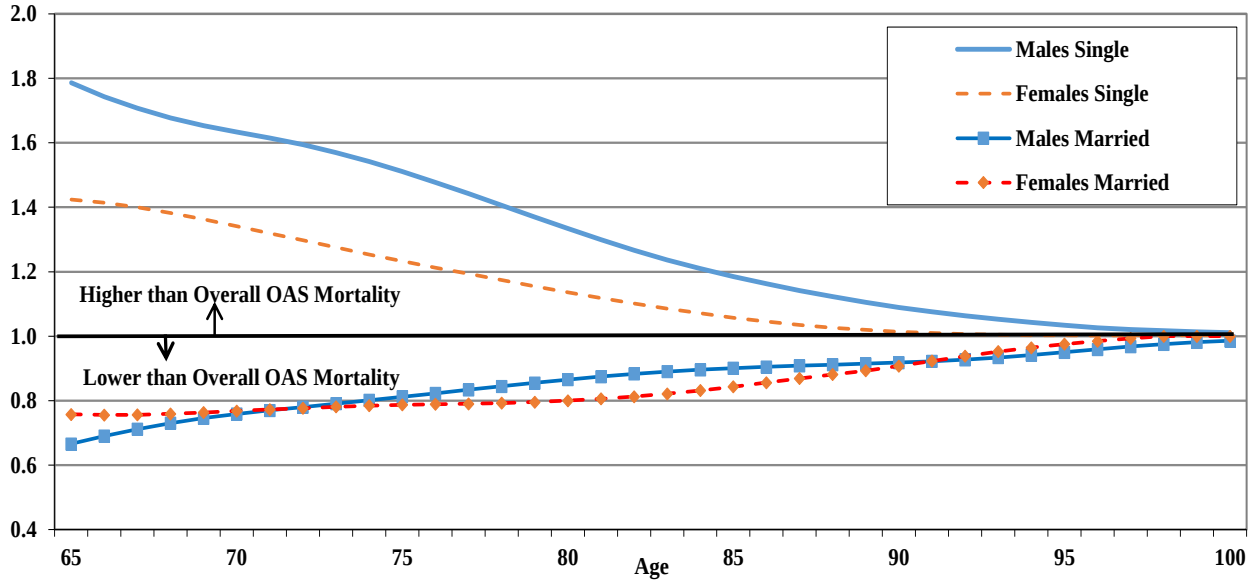
5.2.4 OAS Beneficiary Mortality by Age and Marital Status

Table 19 and Chart 10 show a comparison of mortality rates by age, sex, and marital status for year 2019. Males generally experience more of a mortality differential by marital status than females. The mortality ratio of single to married males is higher than for females at all ages. In 2019, at age 65, married males experience mortality that is 33% lower than for the overall program while it is 24% lower for females. In comparison, at age 65, male singles experience mortality that is 79% higher than for the overall program, while the corresponding percentage for females experience mortality is 42%. As a result, the ratio of single mortality to married mortality is 2.68 for males and of 1.88 for females. For both sexes, married and singles, mortality gradually converges to the overall level as age increases.

Table 19 OAS Beneficiary Graduated Mortality Rates and Ratios by Marital Status (2019)

	Males						Females					
Year	Overall OAS (annual deaths per thousand)	Married (annual deaths per thousand)	Ratio Married to Overall	Single (annual deaths per thousand)	Ratio Single to Overall	Ratio Single to Married	Overall OAS (annual deaths per thousand)	Married (annual deaths per thousand)	Ratio Married to Overall	Single (annual deaths per thousand)	Ratio Single to Overall	Ratio Single to Married
65	12.0	8.0	0.67	21.4	1.79	2.68	7.25	5.49	0.76	10.32	1.42	1.88
70	18.1	13.8	0.76	29.6	1.63	2.15	11.71	9.00	0.77	15.70	1.34	1.75
75	28.4	23.0	0.81	42.9	1.51	1.86	19.05	14.99	0.79	23.49	1.23	1.57
80	47.5	41.1	0.87	63.4	1.33	1.54	32.97	26.38	0.80	37.45	1.14	1.42
85	83.6	75.3	0.90	99.1	1.19	1.32	59.77	50.41	0.84	63.20	1.06	1.25
90	149.7	137.4	0.92	163.0	1.09	1.19	112.05	101.70	0.91	113.61	1.01	1.12
95	245.0	232.8	0.95	253.4	1.03	1.09	195.36	190.57	0.98	195.84	1.00	1.03
100	355.8	350.8	0.99	359.8	1.01	1.03	299.71	299.71	1.00	300.50	1.00	1.00

Chart 10 OAS Beneficiary Mortality Ratios by Marital Status (2019)



5.2.5 Mortality by Marital Status and Type of Benefit

Table 20 and Chart 11 show a comparison of male mortality rates by age, marital status, and type of benefit. Single males in receipt of the GIS experience the highest mortality at most ages. For example, at age 65, single male GIS beneficiaries experience mortality that is almost two and a half times more than that of the overall OAS population. Single males without the GIS experience mortality that is higher compared to married GIS beneficiaries. Married males without the GIS experience the lowest mortality except at the very advanced ages. All subgroups show convergence to overall program mortality as age increases.

However, it should be noted that people living alone at older ages include widows/ers. As shown in CPP30, CPP survivor beneficiaries have higher mortality than the general population. For example in 2019, the difference in period life expectancy at age 65 between male survivors and the general population is 1.5 years. The difference for females is 1.0 years. Therefore, the analysis of OAS mortality trends by marital status must be interpreted with caution so that the 'widow effect' is well understood and considered. Nevertheless, the life expectancy gap between single and married individuals is higher than the gap between survivors and the general population. This points to additional reasons that may

explain this difference in mortality. The lower mortality for married individuals may be related to better socio-economic situations of married individuals, and to the fact that a spouse provides physical and emotional support that has a positive impact on general health and well-being.

Table 20 Mortality Rates and Ratios by Marital Status and Type of Benefit - Males (2019)

		Without GIS					With GIS				
Year	Overall OAS (annual deaths per thousand)	Married (annual deaths per thousand)	Ratio Married to Overall	Single (annual deaths per thousand)	Ratio Single to Overall	Ratio Single to Married	Married (annual deaths per thousand)	Ratio Married to Overall	Single (annual deaths per thousand)	Ratio Single to Overall	Ratio Single to Married
65	12.0	7.6	0.64	16.6	1.39	2.18	9.9	0.83	29.4	2.46	2.96
70	18.1	12.6	0.69	22.4	1.24	1.78	18.3	1.01	37.9	2.09	2.07
75	28.4	20.8	0.73	35.1	1.24	1.69	30.3	1.07	51.8	1.83	1.71
80	47.5	38.2	0.81	55.2	1.16	1.44	48.2	1.02	73.2	1.54	1.52
85	83.6	72.9	0.87	92.1	1.10	1.26	80.4	0.96	108.9	1.30	1.35
90	149.7	135.4	0.90	158.7	1.06	1.17	141.2	0.94	169.5	1.13	1.20
95	245.0	230.8	0.94	254.1	1.04	1.10	235.4	0.96	254.4	1.04	1.08
100	355.8	348.6	0.98	368.2	1.03	1.06	355.6	1.00	358.3	1.01	1.01

Chart 11 Mortality Ratios by Marital Status, and Type of Benefit - Males (2019)

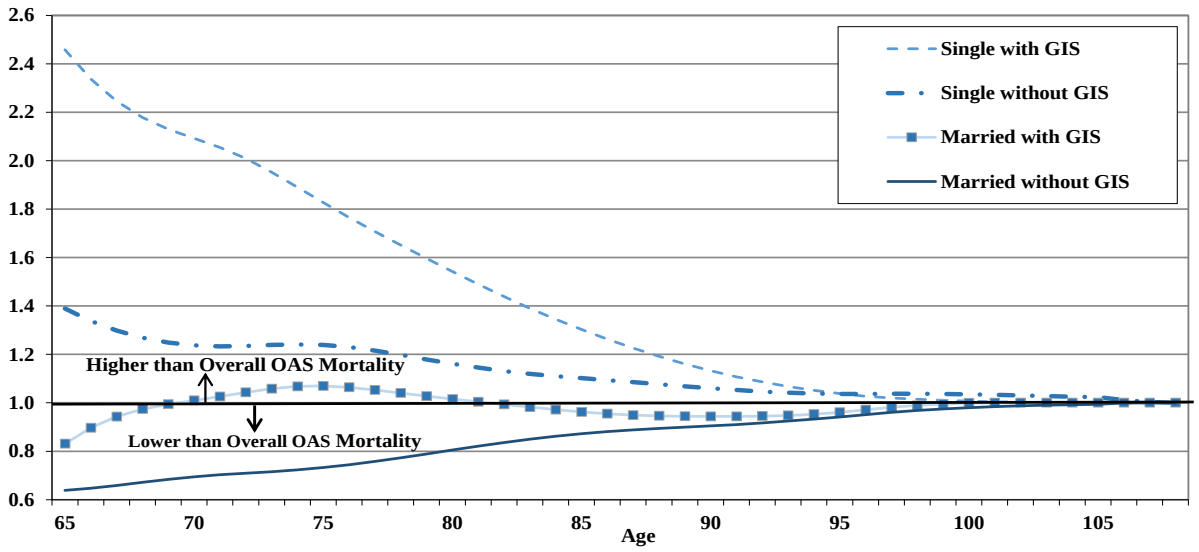


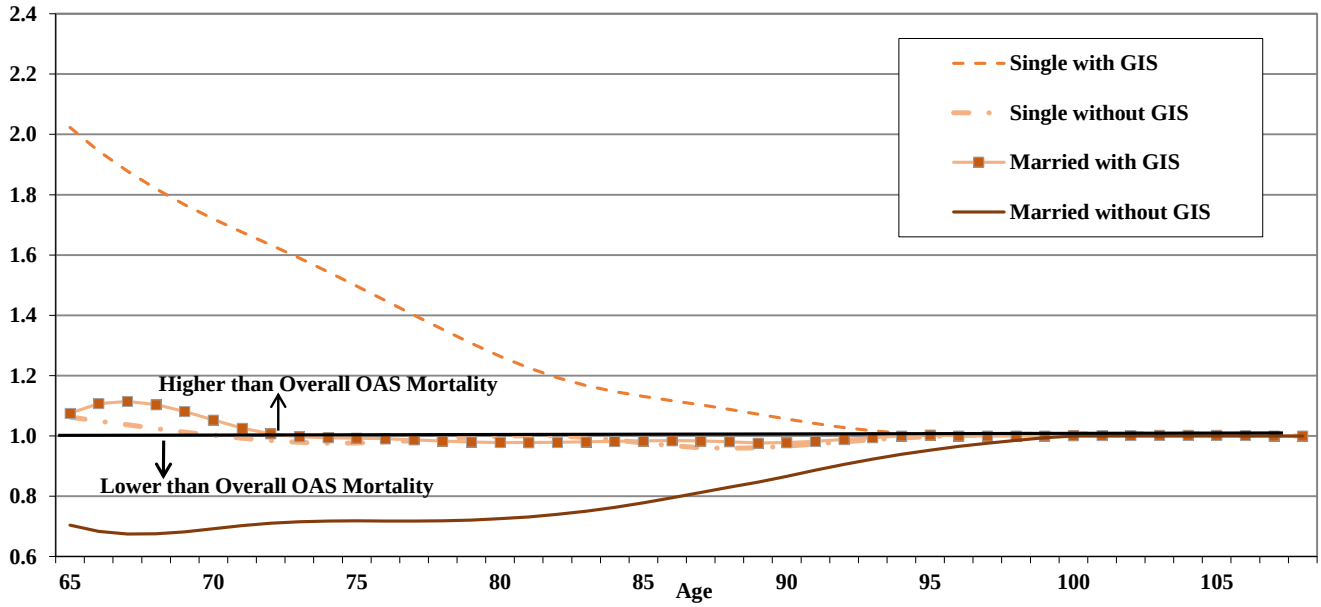
Table 21 and Chart 12 show female mortality rates by age, marital status, and type of benefit. Single female GIS beneficiaries experience the highest mortality of all female beneficiaries, except at the very advanced ages. The mortality ratio for single female GIS beneficiaries relative to the overall program, which is 2.02 at age 65, converges more rapidly to 1.0 with increasing age compared to males. Married female GIS beneficiaries experience mortality that is very similar to that of single females without the GIS. As well, females in these two subgroups experience mortality that is similar to the overall program level, with mortality ratios relative to the program close to one at all ages.

Married females not in receipt of GIS benefits experience the lowest mortality at all ages compared to other subgroups. All subgroups show convergence to the overall program mortality as age increases.

Table 21 Mortality by Marital Status and Type of Benefit - Females (2019)

		Without GIS					With GIS				
Year	Overall OAS (annual deaths per thousand)	Married (annual deaths per thousand)	Ratio Married to Overall	Single (annual deaths per thousand)	Ratio Single to Overall	Ratio Single to Married	Married (annual deaths per thousand)	Ratio Married to Overall	Single (annual deaths per thousand)	Ratio Single to Overall	Ratio Single to Married
65	7.2	5.1	0.70	7.7	1.06	1.51	7.8	1.08	14.7	2.02	1.88
70	11.7	8.1	0.69	11.7	1.00	1.45	12.3	1.05	20.1	1.72	1.63
75	19.0	13.7	0.72	18.6	0.98	1.36	18.9	0.99	28.5	1.50	1.51
80	33.0	23.9	0.73	32.9	1.00	1.38	32.3	0.98	41.7	1.26	1.29
85	59.8	46.5	0.78	58.4	0.98	1.25	58.8	0.98	67.6	1.13	1.15
90	112.0	97.1	0.87	108.3	0.97	1.12	109.6	0.98	118.4	1.06	1.08
95	195.4	186.2	0.95	195.0	1.00	1.05	195.9	1.00	196.2	1.00	1.00
100	299.7	299.7	1.00	301.9	1.01	1.01	300.0	1.00	300.7	1.00	1.00

Chart 12 Mortality Ratios by Marital Status and Type of Benefit - Females (2019)



5.3 Life Expectancies by Marital Status and Type of Benefit

5.3.1 Evolution of OAS Beneficiary Life Expectancies by Marital Status

Table 22 shows the life expectancies for beneficiaries by age, sex, and marital status. For both males and females, the life expectancies of married beneficiaries are higher than those of single beneficiaries.

In 2019, the life expectancies at age 65 are 20.7 years for married males and 16.8 years for singles, and the corresponding life expectancies at age 65 for married and single females are 23.5 and 21.1 years, respectively.

For both sexes, the difference in life expectancies between married and single beneficiaries reduces as age increases.

Table 22 OAS Beneficiary Life Expectancies by Marital Status (2019)

	Males				Females			
Age	Overall OAS	Married	Single	Difference Married - Single	Overall OAS	Married	Single	Difference Married - Single
65	19.4	20.7	16.8	3.9	22.2	23.5	21.1	2.4
70	15.7	16.7	13.6	3.1	18.1	19.2	17.3	1.9
75	12.2	12.9	10.8	2.1	14.3	15.2	13.8	1.4
80	9.0	9.6	8.2	1.4	10.7	11.4	10.5	0.9
85	6.4	6.7	5.9	0.8	7.7	8.1	7.6	0.5
90	4.3	4.6	4.1	0.5	5.3	5.4	5.2	0.2

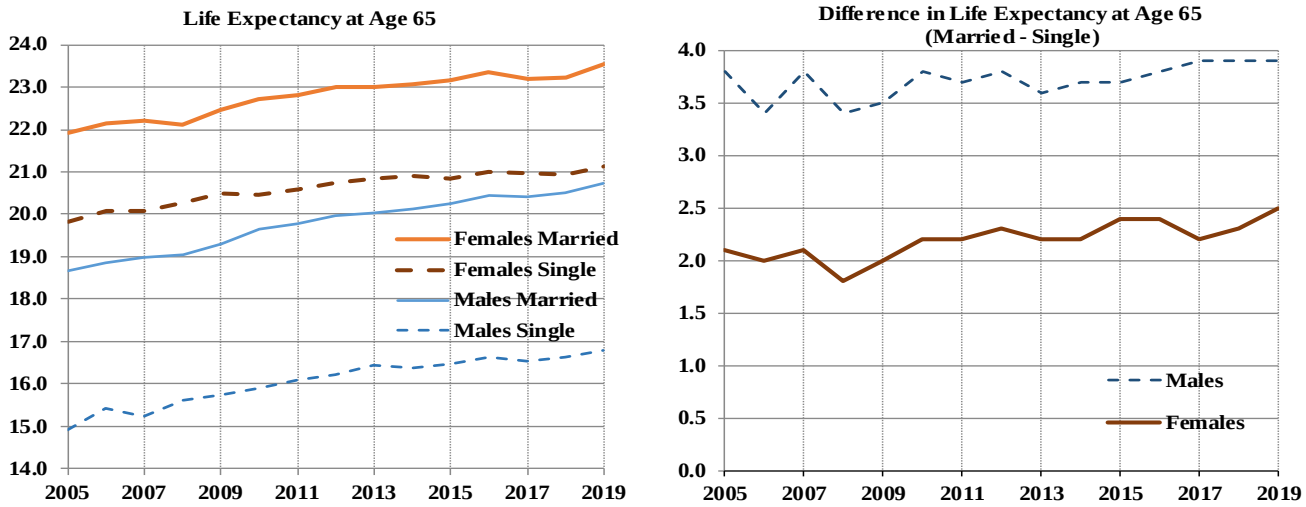
Table 23 and Chart 13 show the evolution of life expectancy at age 65 by sex and marital status for the period 2005 to 2019. Since 2005, for both sexes, the gap in life expectancies at age 65 between married and singles has remained relatively stable, but has increased slightly in recent years and more so for females than males. In 2005, the differentials between married and singles is 3.8 years for males and 2.1 for females. In 2019, the differentials by marital status are 3.9 years and 2.4 years for males and females, respectively.

Table 23 Evolution of OAS Beneficiary Life Expectancies at Age 65 by Marital Status (2005-2019)[(1)]

	Males				Females			
Year	Overall OAS	Married	Single	Difference Married - Single	Overall OAS	Married	Single	Difference Married - Single
2005	17.5	18.7	14.9	3.8	20.7	21.9	19.8	2.1
2006	17.8	18.8	15.4	3.4	21.0	22.1	20.1	2.0
2007	17.8	19.0	15.2	3.8	21.0	22.2	20.1	2.1
2008	18.0	19.0	15.6	3.4	21.1	22.1	20.3	1.8
2009	18.2	19.3	15.8	3.5	21.4	22.5	20.5	2.0
2010	18.5	19.7	15.9	3.8	21.4	22.7	20.5	2.2
2011	18.6	19.8	16.1	3.7	21.5	22.8	20.6	2.2
2012	18.8	20.0	16.2	3.8	21.7	23.0	20.7	2.3
2013	18.9	20.0	16.4	3.6	21.8	23.0	20.8	2.2
2014	18.9	20.1	16.4	3.7	21.9	23.1	20.9	2.2
2015	19.0	20.2	16.5	3.7	21.8	23.2	20.8	2.4
2016	19.2	20.4	16.6	3.8	22.1	23.4	21.0	2.4
2017	19.1	20.4	16.5	3.9	22.0	23.2	21.0	2.2
2018	19.2	20.5	16.6	3.9	22.0	23.2	20.9	2.3
2019	19.4	20.7	16.8	3.9	22.2	23.6	21.1	2.5

(1) Results for years prior to 2005 by marital status are not shown due to data limitation regarding marital status for those years.

Chart 13 Evolution of OAS Beneficiary Life Expectancies at Age 65 by Marital Status
(2005-2019)[1]



(1) Results for years prior to 2005 by marital status are not shown due to data limitation regarding marital status for those years.

5.3.2 Evolution of Life Expectancies by Marital Status and Type of Benefit

Table 24 shows the life expectancies for both sexes by age, marital status, and type of benefit, for the year 2019. For a given marital status, life expectancies of beneficiaries without the GIS are higher than for beneficiaries receiving the benefit. For instance, for single males aged 65, those not in receipt of the GIS live on average 2.8 years longer than those who receive the benefit.

For both sexes and for each benefit type, married beneficiaries live longer than single counterparts. For example, married males aged 65, without the GIS, are expected to live on average 21.1 years or 3.0 years longer than single males (18.1 years). In comparison, for the same benefit subgroup and age, married females are expected to live on average 24.0 years or 1.7 years longer than single females (22.3 years). Married males, aged 65, with the GIS, are expected to live on average 19.5 years or 4.2 years longer than single males (15.3 years). For the same benefit subgroup and age, married females are expected to live on average 22.2 years or 2.2 years longer than single females (20.0 years).

For both sexes in general, single GIS beneficiaries have the lowest life expectancies relative to the other subgroups, while married beneficiaries without the GIS have the highest life expectancies.

Table 24 Life Expectancies by Marital Status and Type of Benefit (2019)

	Males							
Age	Overall OAS Married	Married without GIS	Married with GIS	Difference Married without – with GIS	Overall OAS Single	Single without GIS	Single with GIS	Difference Single without – with GIS
65	20.7	21.1	19.5	1.6	16.8	18.1	15.3	2.8
70	16.7	17.0	15.6	1.4	13.6	14.7	12.5	2.2
75	12.9	13.2	12.2	1.0	10.8	11.4	10.0	1.4
80	9.6	9.7	9.2	0.5	8.2	8.6	7.7	0.9
85	6.7	6.8	6.6	0.2	5.9	6.1	5.7	0.4
90	4.6	4.6	4.5	0.1	4.1	4.2	4.1	0.1

	Females							
Age	Overall OAS Married	Married without GIS	Married with GIS	Difference Married without – with GIS	Overall OAS Single	Single without GIS	Single with GIS	Difference Single without – with GIS
65	23.5	24.0	22.2	1.8	21.1	22.3	20.0	2.3
70	19.2	19.7	18.2	1.5	17.3	18.2	16.5	1.7
75	15.2	15.6	14.3	1.3	13.8	14.4	13.2	1.2
80	11.4	11.8	10.8	1.0	10.5	10.8	10.2	0.6
85	8.1	8.3	7.8	0.5	7.6	7.8	7.4	0.4
90	5.4	5.5	5.3	0.2	5.2	5.3	5.2	0.1

Table 25 and Chart 14 show the evolution of life expectancies at age 65 for both sexes by marital status and type of benefit received for the period 2005 to 2019. Over 2005 to 2019, the life expectancy at age 65 for married males without the GIS increased from 19.2 years to 21.1 years (an increase of 1.9 years). In comparison, for married males with the GIS, life expectancies at age 65 increased from 17.3 to 19.5 years (or by 1.8 years) over the same period. As such, since the mid-2000s, the difference in life expectancies at age 65 for married males between those without and with the GIS has remained relatively stable at around 1.8 years.

Life expectancies at 65 for married females increased from 22.6 to 24.1 years for those without the GIS, and from 20.4 to 22.1 years for those with the benefit over the period 2005 to 2019. For married females age 65, the difference in life expectancies by benefit type fluctuated somewhat more than males, but still remained relatively stable at around 2.0 years from the mid-2000s to 2019.

In comparison, for both single males and females, the differences in life expectancies at age 65 between those without and with the GIS increased overall from the mid-2000s to 2019. For single males, from 2005 to 2019, life expectancy at age 65 for those without the GIS increased by 2.4 years, from 15.7 to 18.1 years. For those receiving the GIS, the increase was 1.4 years, from 13.9 to 15.3 years. As such, the difference in life expectancies at age 65 between single males without and with the GIS increased from 1.9 to 2.8 years over the period 2005 to 2019. Over the same period for single females, life expectancies at age 65 increased by 1.7 years, from 20.6 to 22.3 years for those without the GIS, and by 0.8 of a year, from 19.1 to 20.0 years for those receiving the benefit. Consequently, the difference in life expectancies at age 65 for single females without and with the GIS increased from 1.5 to 2.3 years over 2005 to 2019.

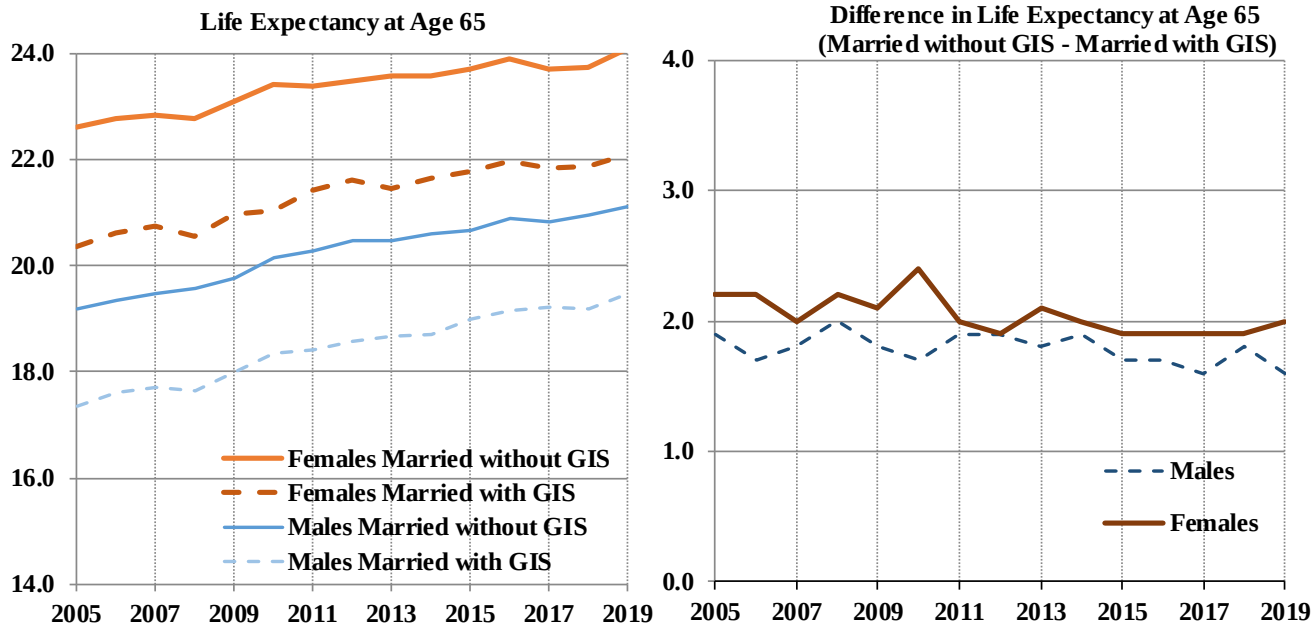
Table 25 Evolution of Life Expectancies at Age 65 by Marital Status and Type of Benefit (2005-2019)[1]

	Males					
Year	Married without GIS	Married with GIS	Difference	Single without GIS	Single with GIS	Difference
2005	19.2	17.3	1.9	15.7	13.9	1.8
2006	19.3	17.6	1.7	16.4	14.2	2.2
2007	19.5	17.7	1.8	16.3	14.0	2.3
2008	19.6	17.6	2.0	16.8	14.2	2.6
2009	19.8	18.0	1.8	16.9	14.4	2.5
2010	20.1	18.4	1.7	16.9	14.7	2.2
2011	20.3	18.4	1.9	17.3	14.7	2.6
2012	20.5	18.6	1.9	17.3	14.9	2.4
2013	20.5	18.7	1.8	17.5	15.1	2.4
2014	20.6	18.7	1.9	17.5	15.0	2.5
2015	20.7	19.0	1.7	17.5	15.2	2.3
2016	20.9	19.2	1.7	17.8	15.2	2.6
2017	20.8	19.2	1.6	17.7	15.2	2.5
2018	21.0	19.2	1.8	17.9	15.2	2.7
2019	21.1	19.5	1.6	18.1	15.3	2.8
	Females					
Year	Married without GIS	Married with GIS	Difference	Single without GIS	Single with GIS	Difference
2005	22.6	20.4	2.2	20.6	19.1	1.5
2006	22.8	20.6	2.2	20.8	19.4	1.4
2007	22.8	20.8	2.0	20.9	19.4	1.5
2008	22.8	20.6	2.2	21.2	19.4	1.8
2009	23.1	21.0	2.1	21.4	19.7	1.7
2010	23.4	21.0	2.4	21.3	19.6	1.7
2011	23.4	21.4	2.0	21.5	19.7	1.8
2012	23.5	21.6	1.9	21.7	19.8	1.9
2013	23.6	21.5	2.1	21.8	19.9	1.9
2014	23.6	21.6	2.0	21.9	19.9	2.0
2015	23.7	21.8	1.9	21.7	20.0	1.7
2016	23.9	22.0	1.9	22.0	20.0	2.0
2017	23.7	21.8	1.9	22.0	20.0	2.0
2018	23.8	21.9	1.9	22.0	19.8	2.2
2019	24.1	22.1	2.0	22.3	20.0	2.3

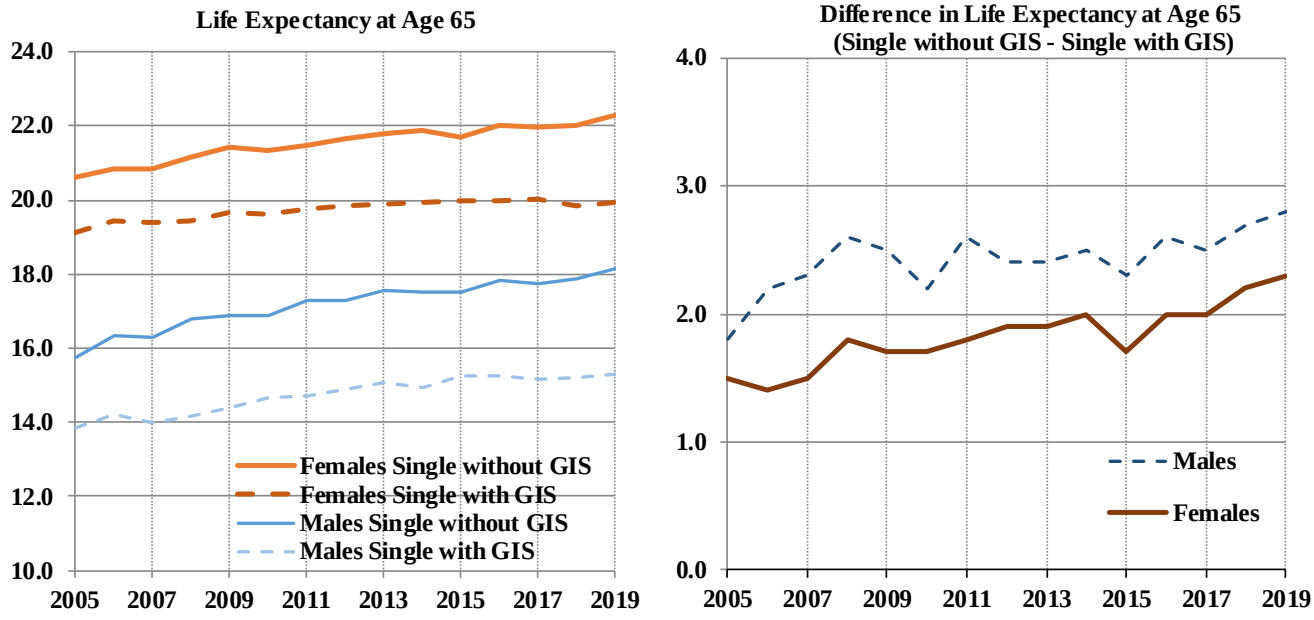
(1) Results for years prior to 2005 are not shown by marital status due to data limitation on marital status for those years.

Chart 14 Life Expectancies at Age 65 by Marital Status and Type of Benefit (2005-2019)[1]

Married



Single



(1) Results for years prior to 2005 are not shown by marital status due to data limitation on marital status for those years.

6 OAS Beneficiary Mortality by Place of Birth

6.1 Introduction

This section presents the results of analysis on the mortality of OAS beneficiaries by whether they were born in Canada or born outside Canada. The results of this study are consistent with the previous OAS program mortality studies prepared by the OCA, which showed that OAS beneficiaries born outside Canada experience lower mortality than those born in Canada. This may be explained by the "healthy immigrant effect" (Vang et al., 2015) that results from several factors, including medical and employability screening prior to entry to Canada as well as cultural and lifestyle characteristics.

First, people in poor health are less likely to migrate to another country. In addition, all potential immigrants to Canada are subject to medical screening. Moreover, immigrants to Canada are partially selected on the basis of employability, which would imply a certain status of health. As new immigrants tend to be healthy, they experience greater life expectancies than those who had immigrated years earlier. Lastly, cultural and lifestyle characteristics of immigrants may also contribute to their relative better health and increased longevities.

6.2 OAS Beneficiary Mortality Experience by Place of Birth for Year 2019

6.2.1 Beneficiaries by Place of Birth

Table 26 shows the proportion of OAS beneficiaries by age group, sex, and place of birth. Overall, about 27% of beneficiaries were born outside Canada. As well, there are higher proportions of beneficiaries born outside Canada at the older age groups.

Table 26 Beneficiaries by Place of Birth (as at December 31st 2019)

	Males			Females		
Age Group	Born in Canada	Born Outside Canada	Proportion Born Outside Canada	Born in Canada	Born Outside Canada	Proportion Born Outside Canada
65-69	744,480	164,428	18%	795,354	197,612	20%
70-74	583,564	220,734	27%	636,389	241,546	28%
75-79	378,599	162,494	30%	436,643	181,454	29%
80-84	228,560	117,109	34%	296,837	141,261	32%
85-89	132,444	71,296	35%	210,471	93,832	31%
90-94	50,440	29,364	37%	110,389	51,578	32%
95-99	10,628	6,587	38%	37,030	17,200	32%
100+	984	652	40%	5,931	2,280	28%
Total	2,129,699	772,664	27%	2,529,044	926,763	27%

Tables 65 to 71 in the Annex show various statistics related to the OAS program by individual age, sex, and place of birth.

6.2.2 OAS Beneficiary Deaths by Place of Birth

Table 27 shows that there is little variation between male and female beneficiaries in the proportions of deaths by age and place of birth, except at ages 95 and over. For age groups between 65 and 94, the proportion of deaths for those born outside Canada varies between 13% and 33% for males and between 14% and 30% for females. At ages 95 and above, the corresponding proportions vary between 35% and 36% for males, and between 26% and 29% for females.

Table 27 OAS Beneficiary Deaths by Place of Birth (2019)

	Males			Females		
Age Group	Born in Canada	Born Outside Canada	Proportion Born Outside Canada	Born in Canada	Born Outside Canada	Proportion Born Outside Canada
65-69	11,421	1,766	13%	7,672	1,224	14%
70-74	13,602	3,717	21%	9,857	2,450	20%
75-79	14,249	4,391	24%	11,235	3,302	23%
80-84	14,817	5,966	29%	13,813	4,787	26%
85-89	15,443	6,847	31%	17,576	6,453	27%
90-94	10,218	5,142	33%	17,020	7,200	30%
95-99	3,497	1,981	36%	9,614	4,018	29%
100+	492	262	35%	2,462	876	26%
Total	83,739	30,072	26%	89,249	30,310	25%

6.2.3 OAS Beneficiary Exposures by Place of Birth

Table 28 shows the proportion of exposures by age group, sex, and place of birth. For male beneficiaries, the increase by age in the proportion of exposures of those born outside Canada reflects the fact that males born outside Canada live longer than those born in Canada. For females, the corresponding proportion by age is much more stable than observed for males.

Table 28 OAS Beneficiary Exposures by Place of Birth (2019)

	Males			Females		
Age Group	Born in Canada	Born Outside Canada	Proportion Born Outside of Canada	Born in Canada	Born Outside Canada	Proportion Born Outside of Canada
65-69	749,524	174,855	19%	790,941	207,064	21%
70-74	570,445	223,569	28%	621,427	242,419	28%
75-79	371,357	160,787	30%	429,138	180,181	30%
80-84	225,652	116,757	34%	294,630	140,752	32%
85-89	131,421	71,209	35%	210,323	93,824	31%
90-94	49,617	29,128	37%	109,904	52,362	32%
95-99	10,384	6,597	39%	36,655	16,998	32%
100+	943	666	41%	5,824	2,307	28%
Total	2,109,343	783,567	27%	2,498,842	935,907	27%

6.2.4 OAS Beneficiary Mortality by Place of Birth

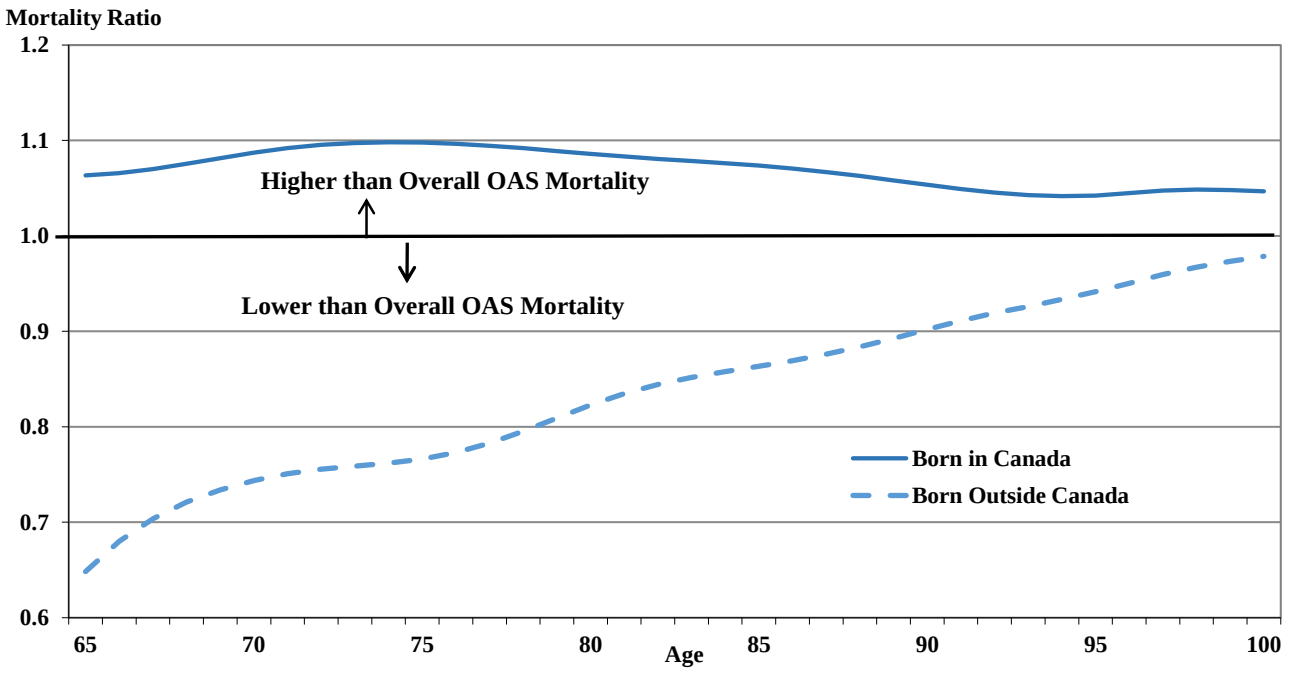
Table 29 and Chart 15 show that, for both sexes, mortality for those born in Canada is higher than the overall OAS program mortality (6% and 7% higher at age 65, respectively for males and females), while mortality is lower for those born outside Canada (35% and 34% lower at age 65, respectively for males and females). In both cases however, mortality approaches that of the overall OAS program as age increases.

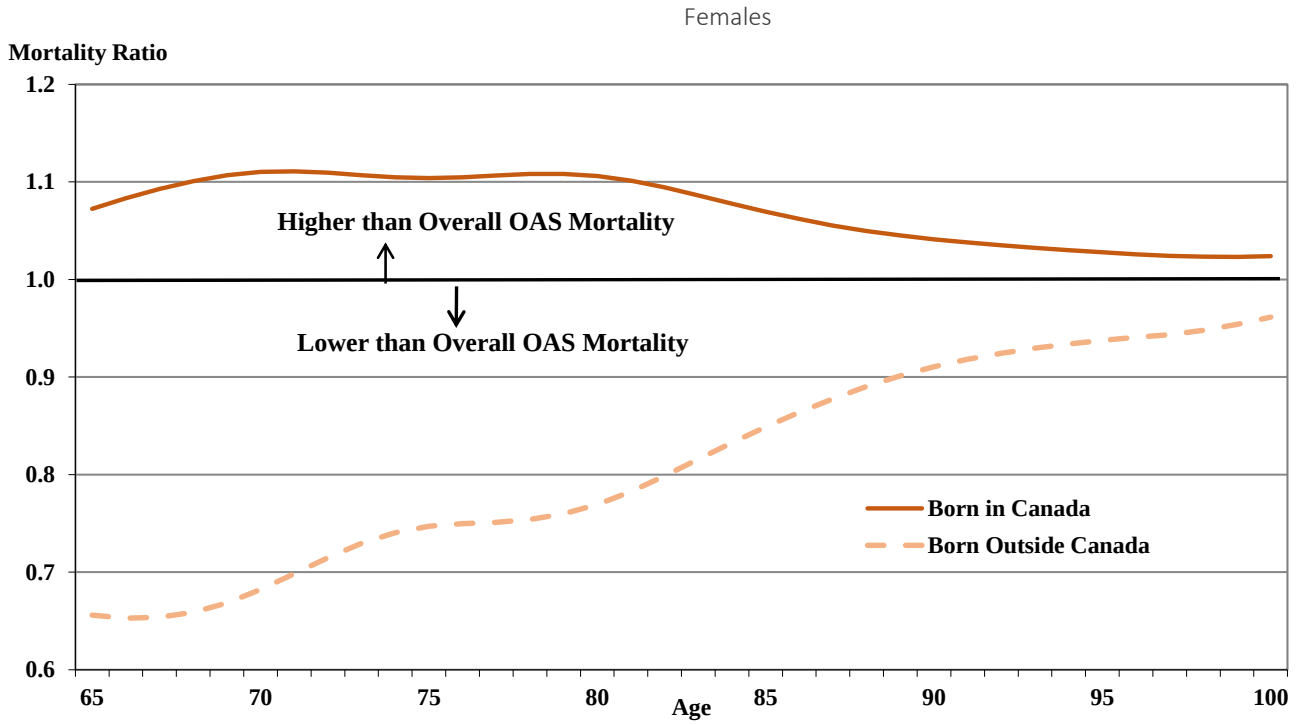
Table 29 OAS Beneficiary Graduated Mortality Rates and Ratios by Place of Birth (2019)

	Males					Females				
Age	Overall OAS (annual deaths per thousand)	Born in Canada (annual deaths per thousand)	Ratio Born in Canada to Overall	Born Outside Canada (annual deaths per thousand)	Ratio Born Outside Canada to Overall	Overall OAS (annual deaths per thousand)	Born in Canada (annual deaths per thousand)	Ratio Born in Canada to Overall	Born Outside Canada (annual deaths per thousand)	Ratio Born Outside Canada to Overall
65	12.0	12.7	1.06	7.8	0.65	7.2	7.8	1.07	4.8	0.66
70	18.1	19.7	1.09	13.5	0.74	11.7	13.0	1.11	8.0	0.68
75	28.4	31.1	1.10	21.7	0.77	19.0	21.0	1.10	14.2	0.75
80	47.5	51.6	1.09	39.1	0.82	33.0	36.5	1.11	25.4	0.77
85	83.6	89.7	1.07	72.2	0.86	59.8	63.9	1.07	50.7	0.85
90	149.7	157.7	1.05	135.0	0.90	112.0	116.7	1.04	102.0	0.91
95	245.0	255.4	1.04	230.7	0.94	195.4	200.8	1.03	183.1	0.94
100	355.8	372.4	1.05	348.2	0.98	299.7	306.9	1.02	288.1	0.96

Chart 15 OAS Beneficiary Mortality Ratios by Place of Birth (2019)

Males





6.3 OAS Beneficiary Life Expectancies by Place of Birth

Table 30 shows life expectancies of OAS program beneficiaries by place of birth. For male beneficiaries, life expectancies at age 65 are 21.0 years for those born outside Canada and 18.8 years for those born in Canada, for a difference of 2.2 years. For female beneficiaries, life expectancies at age 65 are 23.8 years for those born outside Canada and 21.6 years for those born in Canada, a difference also of 2.2 years. For both sexes, the difference in life expectancies by place of birth reduces as age increases.

Table 30 OAS Beneficiary Life Expectancies by Place of Birth (2019)

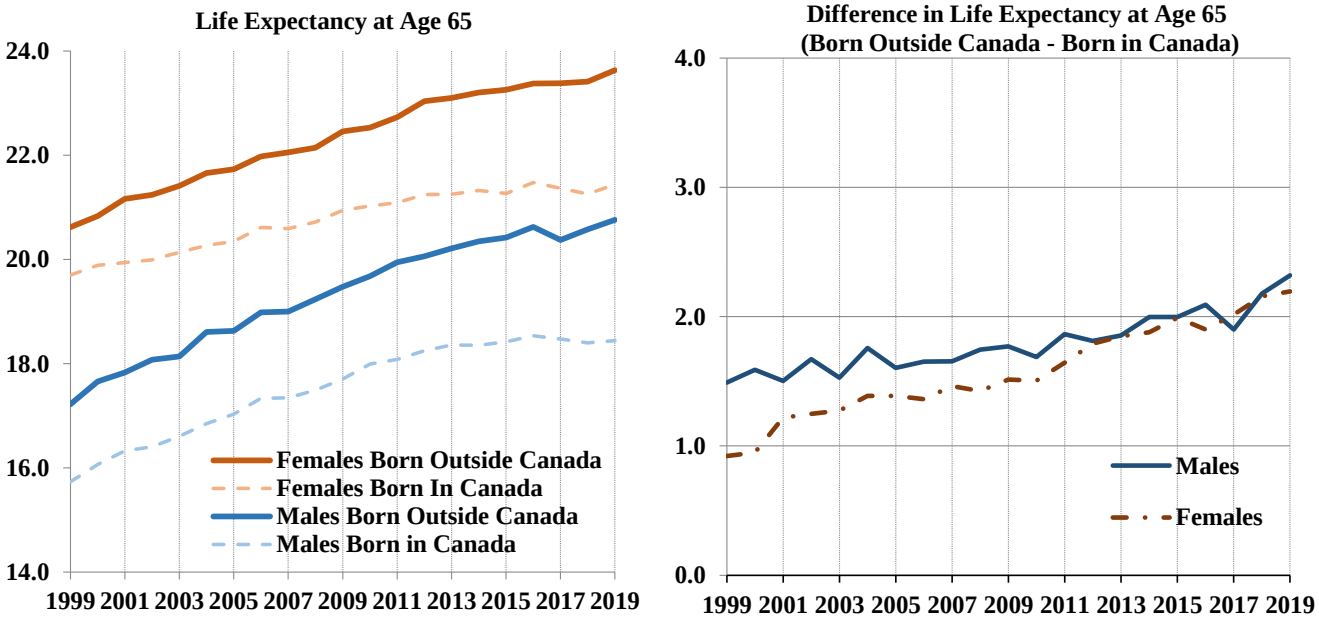
	Males				Females			
Age	Overall OAS	Born Outside Canada	Born In Canada	Difference Born Outside – In Canada	Overall OAS	Born Outside Canada	Born In Canada	Difference Born Outside – In Canada
65	19.4	21.0	18.8	2.2	22.2	23.8	21.6	2.2
70	15.7	16.9	15.1	1.8	18.1	19.4	17.6	1.8
75	12.2	13.2	11.7	1.5	14.3	15.3	13.8	1.5
80	9.0	9.7	8.7	1.0	10.7	11.5	10.4	1.1
85	6.4	6.8	6.1	0.7	7.7	8.2	7.5	0.7
90	4.3	4.6	4.2	0.4	5.3	5.5	5.1	0.4

Table 31 and Chart 16 show that, for both sexes over the period 1999 to 2019, the gap between the life expectancies at age 65 of OAS beneficiaries born outside Canada and those born in Canada has increased. In 1999, the differential by place of birth was 1.5 years for males and 0.9 of a year for females. By 2019, the differential by place of birth for males was 2.3 years and 2.2 years for females.

Table 31 Evolution of OAS Beneficiary Life Expectancies at Age 65 by Place of Birth (1999-2019)

	Males			Females		
Year	Born Outside Canada	Born In Canada	Difference Born Outside – In Canada	Born Outside Canada	Born In Canada	Difference Born Outside – In Canada
1999	17.2	15.7	1.5	20.6	19.7	0.9
2000	17.7	16.1	1.6	20.8	19.9	0.9
2001	17.8	16.3	1.5	21.2	19.9	1.3
2002	18.1	16.4	1.7	21.2	20.0	1.2
2003	18.1	16.6	1.5	21.4	20.1	1.3
2004	18.6	16.9	1.7	21.7	20.3	1.4
2005	18.6	17.0	1.6	21.7	20.3	1.4
2006	19.0	17.3	1.7	22.0	20.6	1.4
2007	19.0	17.3	1.7	22.1	20.6	1.5
2008	19.2	17.5	1.7	22.1	20.7	1.4
2009	19.5	17.7	1.8	22.5	20.9	1.6
2010	19.7	18.0	1.7	22.5	21.0	1.5
2011	19.9	18.1	1.8	22.7	21.1	1.6
2012	20.1	18.3	1.8	23.0	21.2	1.8
2013	20.2	18.4	1.8	23.1	21.3	1.8
2014	20.3	18.4	1.9	23.2	21.3	1.9
2015	20.4	18.4	2.0	23.3	21.3	2.0
2016	20.6	18.5	2.1	23.4	21.5	1.9
2017	20.4	18.5	1.9	23.4	21.4	2.0
2018	20.6	18.4	2.2	23.4	21.3	2.1
2019	20.8	18.4	2.4	23.6	21.4	2.2

Chart 16 Evolution of OAS Beneficiary Life Expectancies at Age 65 by Place of Birth (1999-2019)



7 OAS Beneficiary Mortality Improvement Rates

Historical average annual mortality improvement rates 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. Mortality improvement rates may be used to formulate assumptions about how mortality and consequently life expectancies may evolve in the future.

7.1 Evolution of OAS Beneficiary Mortality Improvement Rates

Table 32 and Chart 17 compare OAS beneficiary mortality improvement rates experienced over the years 2000 to 2014 to those experienced over the more recent years from 2015 to 2019

The average annual mortality improvement rate for males in the age group 65 to 74 over the years 2000 to 2014 is 2.7%, and this compares to a lower level of 1.0% over the more recent years 2015 to 2019. In comparison, for the same age group, the average annual mortality improvement rate for females is 1.9% over the years 2000 to 2014, which compares to a lower level of 1.0% over the more recent years 2015 to 2019.

For the age group 75 to 89, the average annual mortality improvement rates experienced over the years 2000 to 2014 are 2.4% for males and 1.7% for females. These rates are higher than the experience over the more recent years 2015 to 2019 (1.3% and 0.9% for males and females, respectively).

For both male and female beneficiaries, the average annual mortality improvement rates over the period 2015 to 2019 are lower than the rates over the period 2000 to 2014.

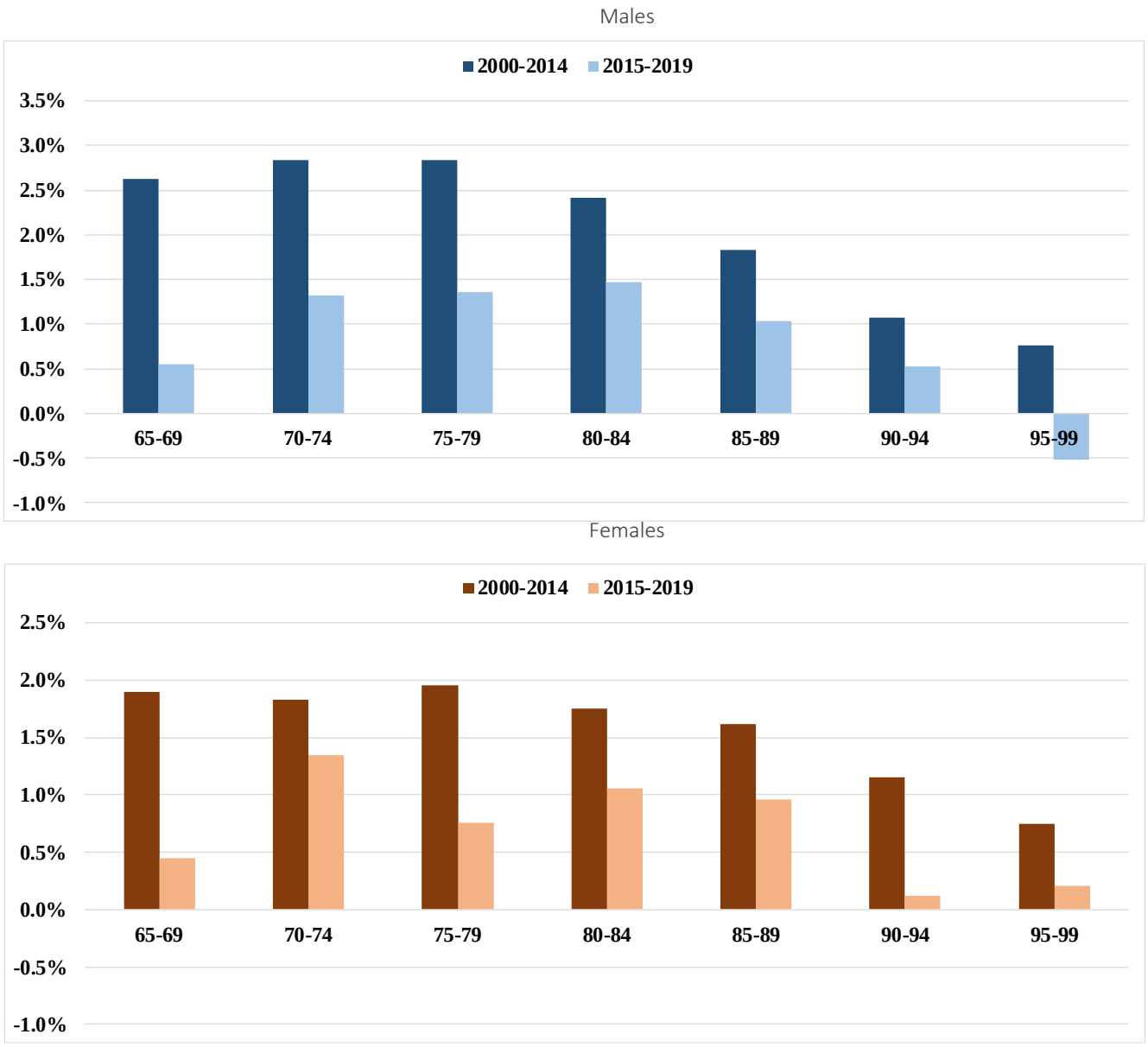
Overall, the average annual mortality improvement rates over the period 2015 to 2019 are 1.0% and 0.7% males and females, respectively

Table 32 OAS Beneficiary Average Annual Mortality Improvement Rates

	2000-2014[1,2]		2015-2019[1,2]		2000-2019[1,2]	
Age Group	Males	Females	Males	Females	Males	Females
65-69	2.6%	1.9%	0.6%	0.4%	2.0%	1.6%
70-74	2.8%	1.8%	1.3%	1.3%	2.4%	1.6%
75-79	2.8%	2.0%	1.4%	0.8%	2.5%	1.7%
80-84	2.4%	1.7%	1.5%	1.1%	2.2%	1.6%
85-89	1.8%	1.6%	1.0%	1.0%	1.6%	1.5%
90-94	1.1%	1.1%	0.5%	0.1%	1.0%	1.0%
95-99	0.8%	0.7%	-0.5%	0.2%	0.6%	0.7%
100+	0.3%	0.6%	-0.9%	0.2%	0.4%	0.4%
Total	2.2%	1.5%	1.0%	0.7%	2.0%	1.3%
65-74	2.7%	1.9%	1.0%	1.0%	2.3%	1.6%
75-89	2.4%	1.7%	1.3%	0.9%	2.1%	1.6%

(1) Improvement rates obtained using the corresponding 2019 exposures and populations as weights.
(2) The results shown here are consistent with the ones presented in the OCA OAS Mortality fact sheet 2020.

Chart 17 OAS Beneficiary Mortality Improvement Rates



7.1.1 Comparison of OAS Beneficiary and Population Mortality Improvements

Table 33 compares the OAS beneficiary average annual mortality improvement rates with those of the population of Canada. For the years 2000 to 2019, mortality improvement rates of OAS beneficiaries for both sexes and most age groups are similar to those observed for the general population.

Over the period 2015 to 2019, the overall mortality improvement rate for male beneficiaries is 1.0%, which is similar to that for the general population. The corresponding mortality improvement rates for female beneficiaries and the population are 0.7% and 0.6%, respectively.

Table 33 OAS Beneficiary and Population Average Annual Mortality Improvement Rates[1]

	Males				Females			
	2000-2014		2015-2019		2000-2014		2015-2019	
Age Group	OAS	Population[1]	OAS	Population[1]	OAS	Population[1]	OAS	Population[1]
65-69	2.6%	2.6%	0.6%	1.1%	1.9%	1.3%	0.4%	1.1%
70-74	2.8%	2.7%	1.3%	1.1%	1.8%	0.9%	1.3%	0.9%
75-79	2.8%	2.6%	1.4%	1.0%	2.0%	0.5%	0.8%	0.8%
80-84	2.4%	2.6%	1.5%	1.0%	1.7%	1.1%	1.1%	0.6%
85-89	1.8%	2.2%	1.0%	0.9%	1.6%	1.7%	1.0%	0.5%
90-94	1.1%	1.4%	0.5%	0.8%	1.1%	1.6%	0.1%	0.4%
95-99	0.8%	0.7%	-0.5%	0.8%	0.7%	0.4%	0.2%	0.8%
100+	0.3%	0.3%	-0.9%	0.7%	0.6%	0.0%	0.2%	0.8%
Total	2.2%	2.4%	1.0%	1.0%	1.5%	1.2%	0.7%	0.6%
65-74	2.7%	2.7%	1.0%	1.1%	1.9%	1.1%	1.0%	1.0%
75-89	2.4%	2.5%	1.3%	1.0%	1.7%	1.2%	0.9%	0.6%

(1) Population mortality improvement rates are based on Statistics Canada's 2019 CLT data using the 2019 population as weights. OCA calculations.

7.1.2 Mortality Improvement Rates by Type of Benefit

Table 34, Table 35 and Chart 18 show mortality improvement rates for two periods, 2000 to 2014 and 2015 to 2019 by age group, sex, and type of benefit received. For both sexes, mortality improvements for GIS beneficiaries have generally been lower than for OAS beneficiaries not receiving the GIS. For example, over the years 2015 to 2019, for ages 65 to 74, GIS beneficiaries experienced average annual mortality improvement rates of 0.6% for males and 0.2% for females, which compare to average annual improvement rates of 1.5% for males and females not receiving the GIS.

Comparing two periods 2000 to 2014 and 2015 to 2019, mortality improvement rates are generally lower in 2015 to 2019 by age group, sex and type of benefits received. For example, over the years 2015 to 2019, for ages 65 to 74, GIS beneficiaries experienced average annual mortality improvement rates of 0.6% for males and 0.2% for females, which compare to average annual improvement rates of 2.0% for males and 1.4% for females not receiving the GIS during years 2000-2014.

Table 34 Average Annual Mortality Improvement Rates by Type of Benefit (2000-2014)

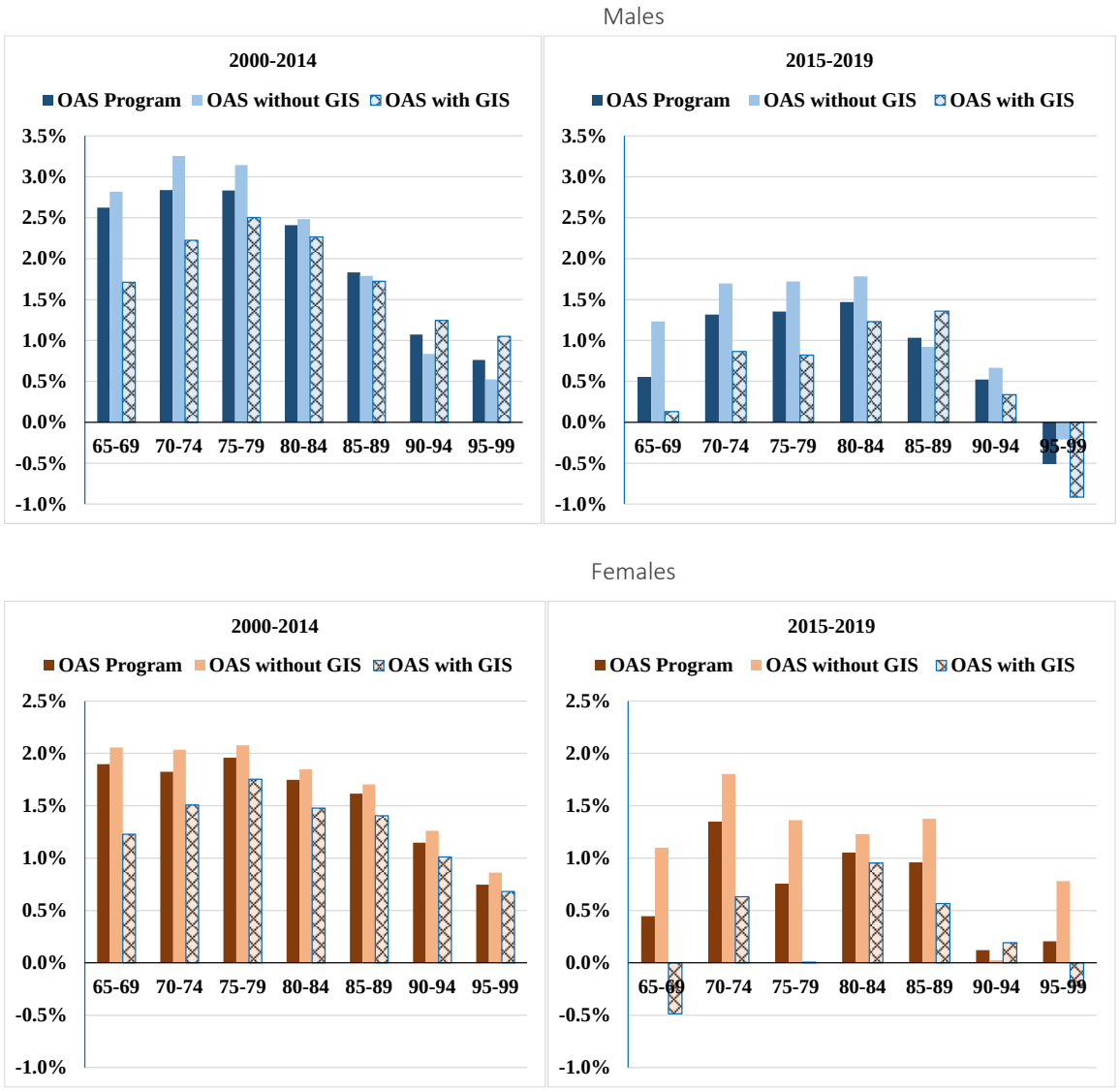
	Males				Females			
Age Group	Overall OAS	without GIS	with GIS	Difference	Overall OAS	without GIS	with GIS	Difference
65-69	2.6%	2.8%	1.7%	1.1%	1.9%	2.1%	1.2%	0.9%
70-74	2.8%	3.3%	2.2%	1.1%	1.8%	2.0%	1.5%	0.5%
75-79	2.8%	3.1%	2.5%	0.6%	2.0%	2.1%	1.8%	0.3%
80-84	2.4%	2.5%	2.3%	0.2%	1.7%	1.8%	1.5%	0.3%
85-89	1.8%	1.8%	1.7%	0.1%	1.6%	1.7%	1.4%	0.3%
90-94	1.1%	0.8%	1.2%	-0.4%	1.1%	1.3%	1.0%	0.3%
95-99	0.8%	0.5%	1.1%	-0.6%	0.7%	0.9%	0.7%	0.2%
Total	2.2%	2.4%	2.0%	0.4%	1.5%	1.7%	1.3%	0.4%
65-74	2.7%	3.1%	2.0%	1.1%	1.9%	2.0%	1.4%	0.6%
75-89	2.4%	2.5%	2.2%	0.3%	1.7%	1.9%	1.5%	0.4%

Table 35 Average Annual Mortality Improvement Rates by Type of Benefit (2015-2019)

	Males				Females			
Age Group	Overall OAS	without GIS	with GIS	Difference	Overall OAS	without GIS	with GIS	Difference
65-69	0.6%	1.2%	0.1%	1.1%	0.4%	1.1%	-0.5%	1.6%
70-74	1.3%	1.7%	0.9%	0.8%	1.3%	1.8%	0.6%	1.2%
75-79	1.4%	1.7%	0.8%	0.9%	0.8%	1.4%	0.0%	1.4%
80-84	1.5%	1.8%	1.2%	0.6%	1.1%	1.2%	1.0%	0.2%
85-89	1.0%	0.9%	1.4%	-0.5%	1.0%	1.4%	0.6%	0.8%
90-94	0.5%	0.7%	0.3%	0.4%	0.1%	0.0%	0.2%	-0.2%
95-99	-0.5%	-0.2%	-0.9%	0.7%	0.2%	0.8%	-0.2%	1.0%
Total	1.0%	1.3%	0.8%	0.5%	0.7%	1.1%	0.3%	0.8%
65-74	1.0%	1.5%	0.6%	0.9%	1.0%	1.5%	0.2%	1.3%
75-89	1.3%	1.5%	1.1%	0.4%	0.9%	1.3%	0.6%	0.7%

As mortality improvement rates have been lower for those receiving the GIS, the gap in life expectancies at age 65 between those with and without GIS has increased over the years 2000 to 2019 (as shown earlier in Table 16).

Chart 18 OAS Mortality Improvement Rates by Type of Benefit



8 Conclusion

In general, this study confirms the results that were obtained by the previous OAS program mortality studies. The analysis by type of benefit received shows that beneficiaries who do not receive the GIS experience lower mortality compared to those who receive the GIS. The analysis by marital status shows that beneficiaries who are married experience lower mortality than single beneficiaries. The analysis by place of birth shows that beneficiaries who were born outside Canada experience lower mortality than those born in Canada.

The study also reveals that mortality improvement rates over the recent years from 2015 to 2019 have been generally lower than improvement rates experienced over the previous 15 year period from 2000 to 2014.

Appendix A — Detailed Tables by Year, Age and Sex

Table 36 OAS Beneficiaries by Age and Sex (as at 31 December 1999, 2009, 2019)

	Males			Females		
Age	1999	2009	2019	1999	2009	2019
65	103,063	139,772	185,891	110,688	148,816	202,126
66	105,010	141,398	187,281	111,178	149,533	205,253
67	106,802	133,824	183,329	114,134	141,464	200,194
68	103,979	123,116	177,652	113,601	131,935	194,361
69	103,007	117,006	174,755	113,287	126,896	191,032
70	94,657	110,284	174,162	107,661	120,507	189,626
71	92,102	106,344	170,408	106,877	116,798	185,624
72	87,359	98,781	173,352	104,404	110,658	188,439
73	83,423	95,946	155,009	102,978	107,789	169,686
74	78,754	91,563	131,367	101,568	105,076	144,560
75	73,673	86,947	125,625	98,657	101,677	139,611
76	68,316	83,329	119,255	94,419	98,154	133,865
77	64,497	81,722	109,090	92,112	98,432	124,101
78	59,860	76,692	97,305	87,879	95,802	113,268
79	55,120	73,417	89,818	83,824	93,320	107,252
80	42,631	64,504	81,958	67,444	86,145	99,576
81	38,781	60,063	75,858	64,237	82,818	93,890
82	34,344	53,963	67,906	58,534	78,562	86,627
83	30,857	48,486	63,155	54,740	74,125	81,631
84	27,914	43,049	56,792	51,661	69,934	76,374
85	24,741	37,291	50,722	47,762	64,727	70,696
86	20,254	31,927	45,537	41,485	58,731	65,078
87	17,027	27,625	41,177	36,148	53,610	61,584
88	13,093	23,423	35,672	30,011	47,260	56,137
89	10,642	19,096	30,632	25,979	41,737	50,808
90	8,389	12,995	24,073	21,475	30,676	43,072
91	6,663	10,228	19,652	17,948	26,285	37,586
92	5,025	7,912	15,442	14,290	21,068	32,368
93	3,560	5,976	11,771	11,108	17,301	26,789
94	2,516	4,587	8,866	8,636	14,304	22,152
95	1,828	3,349	6,400	6,375	11,177	17,762
96	1,322	2,361	4,422	4,882	8,085	13,529
97	845	1,494	3,103	3,518	5,933	10,388
98	562	911	2,000	2,409	4,014	7,330
99	364	585	1290	1,695	2,734	5,221
100	231	350	694	1,101	1,803	3,085
101	116	205	409	721	1175	2,037
102	84	134	225	427	665	1211
103	48	60	129	278	384	775
104	26	39	83	136	230	509
105+	18	28	96	176	305	594
Total	1,571,503	2,020,782	2,902,363	2,116,443	2,550,645	3,455,807

Table 37 OAS Beneficiary Deaths by Age and Sex (1999, 2009, 2019)

	Males			Females		
Age	1999	2009	2019	1999	2009	2019
65	1,791	1,827	2,288	1,029	1,164	1,453
66	2,147	2,070	2,543	1,347	1,341	1,719
67	2,285	2,132	2,608	1,416	1,368	1,764
68	2,519	2,282	2,770	1,475	1,440	1,882
69	2,799	2,291	2,978	1,632	1,438	2,078
70	2,876	2,333	3,227	1,732	1,615	2,181
71	3,033	2,320	3,425	1,910	1,670	2,423
72	3,040	2,491	3,706	2,018	1,825	2,722
73	3,284	2,734	3,487	2,365	1,889	2,471
74	3,452	2,823	3,474	2,479	2,115	2,510
75	3,597	3,008	3,472	2,651	2,196	2,657
76	3,638	3,295	3,746	2,791	2,395	2,762
77	3,777	3,560	3,756	3,050	2,700	2,844
78	3,830	3,694	3,797	3,284	2,920	3,124
79	3,704	3,812	3,869	3,460	3,088	3,150
80	3,343	3,822	3,989	3,284	3,369	3,283
81	3,484	4,019	4,036	3,228	3,660	3,454
82	3,252	3,887	4,146	3,417	3,835	3,696
83	3,317	4,015	4,329	3,635	4,026	3,950
84	3,424	3,971	4,283	3,996	4,389	4,217
85	3,242	3,837	4,396	4,086	4,507	4,264
86	2,943	3,732	4,584	3,908	4,632	4,661
87	2,636	3,552	4,474	3,687	4,747	4,818
88	2,316	3,237	4,614	3,654	4,700	5,112
89	2,055	2,887	4,222	3,481	4,640	5,174
90	1,765	2,267	3,843	3,158	3,952	5,229
91	1,450	2,143	3,581	2,983	3,700	5,129
92	1,226	1,722	3,027	2,625	3,569	4,952
93	910	1,519	2,725	2325	3,093	4,602
94	790	1,184	2,184	1942	2,865	4,308
95	564	898	1,774	1670	2501	3,763
96	463	728	1401	1298	2026	3251
97	313	483	1052	1043	1613	2787
98	218	330	743	777	1248	2163
99	156	279	508	569	859	1668
100	80	144	262	421	655	1142
101	71	107	211	318	427	719
102	24	52	111	194	287	533
103	13	36	72	122	176	370
104	12	19	46	89	112	242
105+	17	24	52	112	157	332
Total	83,856	89,566	113,811	88,661	98,909	119,559

Table 38 OAS Beneficiary Exposures by Age and Sex (1999, 2009, 2019)

	Males			Females		
Age	1999	2009	2019	1999	2009	2019
65	102,373	139,907	192,186	107,807	146,855	205,066
66	107,365	140,631	192,060	113,765	147,789	206,882
67	107,113	130,173	183,961	114,445	137,657	199,345
68	104,679	122,717	179,467	113,966	131,627	195,099
69	100,831	114,681	176,705	111,759	124,148	191,613
70	94,777	110,072	174,830	107,989	119,858	189,547
71	91,805	104,392	173,182	106,953	115,015	187,440
72	86,701	98,167	170,925	104,366	109,716	185,460
73	83,021	95,567	144,360	103,616	107,772	157,836
74	78,097	90,875	130,717	101,386	104,590	143,562
75	72,994	86,642	125,045	98,014	100,689	138,907
76	68,016	84,367	117,193	94,414	99,829	131,548
77	64,579	81,238	105,482	92,406	98,388	120,491
78	58,550	76,837	96,572	86,256	96,123	113,295
79	52,679	71,406	87,851	80,507	91,770	105,079
80	41,675	64,278	81,533	66,755	86,163	98,951
81	38,095	59,494	74,482	62,613	82,983	92,744
82	34,140	53,064	67,540	58,599	78,147	85,894
83	30,930	48,019	62,668	55,008	74,397	81,742
84	28,168	42,291	56,186	52,046	69,608	76,050
85	24,140	36,726	50,545	46,817	64,157	70,142
86	20,058	31,619	45,942	40,804	58,511	66,132
87	16,203	27,404	40,812	35,007	53,389	61,555
88	12,956	22,623	35,588	29,703	46,367	56,416
89	10,513	18,040	29,744	25,447	39,955	49,902
90	8,237	12,534	23,769	21,218	30,041	43,122
91	6,551	10,058	19,508	17,596	25,395	37,934
92	4,786	7,738	15,118	13,957	21,037	32,122
93	3,434	5,929	11,631	10,988	17,196	26,936
94	2,485	4,548	8,719	8,344	14,234	22,152
95	1,819	3,245	6,284	6,447	10,790	17,552
96	1,263	2,271	4,388	4,715	7,918	13,570
97	808	1,426	3,084	3,426	5,738	10,332
98	554	881	1,980	2,373	3,928	7,183
99	353	590	1,244	1,654	2,641	5,017
100	218	337	646	1,078	1,761	3,033
101	126	215	413	707	1,084	1,955
102	71	120	216	428	666	1,252
103	41	63	140	260	364	789
104	19	38	89	139	240	499
105+	23	35	106	174	285	603
Total	1,561,247	2,001,255	2,892,910	2,103,951	2,528,823	3,434,749

Table 39 OAS Beneficiary Graduated Mortality Rates by Age and Sex (1999, 2009, 2019)

	Males			Females		
	Annual Deaths per Thousand			Annual Deaths per Thousand		
Age	1999	2009	2019	1999	2009	2019
65	17.5	13.1	12.0	10.1	8.0	7.2
66	19.5	14.7	13.0	11.0	8.9	8.0
67	21.7	16.2	14.1	12.1	9.8	8.8
68	24.1	17.8	15.4	13.3	10.8	9.7
69	26.7	19.3	16.7	14.5	11.9	10.7
70	29.4	21.0	18.1	16.0	13.2	11.7
71	32.3	22.9	19.7	17.7	14.5	12.9
72	35.5	25.2	21.5	19.6	16.0	14.2
73	39.1	27.8	23.5	21.7	17.7	15.6
74	42.9	30.8	25.8	24.1	19.6	17.2
75	47.2	34.2	28.4	26.7	21.7	19.0
76	51.9	38.1	31.3	29.7	24.1	21.2
77	57.1	42.3	34.7	33.1	26.9	23.6
78	62.9	47.0	38.4	36.9	30.1	26.3
79	69.4	52.2	42.7	41.3	33.7	29.4
80	76.6	58.0	47.5	46.1	37.8	33.0
81	84.5	64.5	52.9	51.6	42.5	37.0
82	93.3	71.7	59.1	57.8	47.7	41.6
83	102.9	79.9	66.2	64.9	53.6	46.8
84	113.4	89.0	74.3	72.8	60.2	52.9
85	124.6	99.1	83.6	81.7	67.8	59.8
86	136.6	110.2	94.1	91.5	76.3	67.7
87	149.4	122.5	106.0	102.3	86.0	76.9
88	162.8	135.8	119.2	114.2	96.9	87.3
89	177.0	150.3	133.8	127.0	108.9	99.0
90	191.8	165.7	149.7	140.9	122.2	112.0
91	207.2	182.0	166.8	155.8	136.6	126.4
92	223.3	199.0	185.1	171.7	152.1	141.9
93	239.7	216.7	204.3	188.3	168.6	158.7
94	256.5	234.9	224.4	205.8	186.1	176.5
95	273.5	253.7	245.0	224.1	204.6	195.4
96	290.6	273.1	266.2	243.0	223.8	215.1
97	307.6	293.1	287.6	262.6	243.7	235.6
98	325.8	314.0	309.7	282.9	264.2	256.6
99	345.2	335.7	332.5	303.9	285.1	278.0
100	365.4	358.0	355.8	325.6	306.6	299.7
101	386.5	380.8	379.4	348.0	328.4	321.5
102	408.0	404.0	403.2	370.5	350.7	344.0
103	430.0	427.3	427.1	393.1	373.4	366.9
104	452.3	450.6	450.9	415.5	396.4	390.1
105	474.6	473.8	474.4	437.7	419.3	413.3
110	581.0	582.2	583.3	540.4	528.5	524.8
115	663.3	664.0	664.6	616.7	612.6	611.3
120	700.0	700.0	700.0	650.0	650.0	650.0

Table 40 Life Table of OAS Beneficiaries (2019)

	Males				Females			
Age	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$
65	100,000	12.0	1,197	19.41	100,000	7.2	725	22.21
66	98,803	13.0	1,285	18.64	99,275	8.0	795	21.37
67	97,519	14.1	1,378	17.88	98,480	8.8	869	20.54
68	96,141	15.4	1,476	17.13	97,611	9.7	947	19.71
69	94,664	16.7	1,579	16.39	96,665	10.7	1,030	18.90
70	93,085	18.1	1,688	15.66	95,634	11.7	1,120	18.10
71	91,397	19.7	1,804	14.94	94,514	12.9	1,217	17.31
72	89,593	21.5	1,928	14.23	93,298	14.2	1,321	16.53
73	87,665	23.5	2,062	13.53	91,976	15.6	1,435	15.76
74	85,603	25.8	2,208	12.85	90,542	17.2	1,558	15.00
75	83,395	28.4	2,366	12.17	88,983	19.0	1,695	14.25
76	81,029	31.3	2,537	11.51	87,288	21.2	1,847	13.52
77	78,492	34.7	2,721	10.87	85,442	23.6	2,014	12.80
78	75,771	38.4	2,912	10.24	83,428	26.3	2,196	12.10
79	72,859	42.7	3,111	9.63	81,232	29.4	2,391	11.41
80	69,748	47.5	3,313	9.04	78,842	33.0	2,599	10.74
81	66,435	52.9	3,517	8.46	76,242	37.0	2,820	10.09
82	62,919	59.1	3,721	7.91	73,422	41.6	3,053	9.46
83	59,198	66.2	3,920	7.38	70,369	46.8	3,296	8.85
84	55,278	74.3	4,109	6.86	67,073	52.9	3,545	8.26
85	51,170	83.6	4,277	6.37	63,528	59.8	3,797	7.69
86	46,892	94.1	4,413	5.91	59,731	67.7	4,045	7.15
87	42,479	106.0	4,501	5.47	55,686	76.9	4,280	6.63
88	37,978	119.2	4,526	5.06	51,406	87.3	4,486	6.15
89	33,452	133.8	4,475	4.68	46,919	99.0	4,645	5.68
90	28,978	149.7	4,337	4.32	42,274	112.0	4,737	5.25
91	24,641	166.8	4,110	4.00	37,537	126.4	4,744	4.85
92	20,531	185.1	3,800	3.70	32,794	141.9	4,655	4.48
93	16,731	204.3	3,418	3.42	28,139	158.7	4,465	4.14
94	13,312	224.4	2,987	3.17	23,674	176.5	4,179	3.83
95	10,325	245.0	2,530	2.94	19,495	195.4	3,809	3.54
96	7,795	266.2	2,075	2.74	15,687	215.1	3,374	3.28
97	5,720	287.6	1,645	2.55	12,313	235.6	2,900	3.05
98	4,075	309.7	1,262	2.37	9,412	256.6	2,415	2.83
99	2,813	332.5	935	2.22	6,997	278.0	1,945	2.64
100	1,878	355.8	668	2.07	5,052	299.7	1,514	2.46
101	1,210	379.4	459	1.94	3,538	321.5	1,137	2.30
102	751	403.2	303	1.82	2,400	344.0	826	2.15
103	448	427.1	191	1.71	1,575	366.9	578	2.01
104	257	450.9	116	1.61	997	390.1	389	1.89
105	141	474.4	67	1.52	608	413.3	251	1.77
110	4	583.3	2	1.18	28	524.8	15	1.35
115	0	664.6	0	0.99	0	611.3	0	1.12
120	0	700.0	0	0.80	0	650.0	0	0.85

Table 41 OAS Beneficiary and Population Graduated Mortality Rates and Ratios (2019)

	Males			Females		
	Annual Deaths Per Thousand		Ratio OAS to Population	Annual Deaths Per Thousand		Ratio OAS to Population
Age	OAS	Population		OAS	Population	
65	12.0	10.8	1.11	7.2	6.9	1.05
66	13.0	11.9	1.09	8.0	7.6	1.06
67	14.1	13.1	1.08	8.8	8.4	1.05
68	15.4	14.4	1.07	9.7	9.2	1.05
69	16.7	15.9	1.05	10.7	10.2	1.04
70	18.1	17.5	1.04	11.7	11.3	1.03
71	19.7	19.3	1.02	12.9	12.5	1.03
72	21.5	21.3	1.01	14.2	13.9	1.02
73	23.5	23.5	1.00	15.6	15.5	1.01
74	25.8	25.9	0.99	17.2	17.2	1.00
75	28.4	28.7	0.99	19.0	19.1	1.00
76	31.3	31.7	0.99	21.2	21.3	0.99
77	34.7	35.1	0.99	23.6	23.7	0.99
78	38.4	38.9	0.99	26.3	26.5	0.99
79	42.7	43.1	0.99	29.4	29.6	0.99
80	47.5	47.8	0.99	33.0	33.1	1.00
81	52.9	53.1	1.00	37.0	37.1	1.00
82	59.1	59.0	1.00	41.6	41.6	1.00
83	66.2	65.5	1.01	46.8	46.6	1.00
84	74.3	72.9	1.02	52.9	52.4	1.01
85	83.6	81.1	1.03	59.8	58.9	1.01
86	94.1	90.3	1.04	67.7	66.3	1.02
87	106.0	100.6	1.05	76.9	74.7	1.03
88	119.2	112.2	1.06	87.3	84.2	1.04
89	133.8	125.2	1.07	99.0	95.1	1.04
90	149.7	139.7	1.07	112.0	107.5	1.04
91	166.8	155.7	1.07	126.4	121.3	1.04
92	185.1	172.7	1.07	141.9	136.2	1.04
93	204.3	190.7	1.07	158.7	152.3	1.04
94	224.4	209.7	1.07	176.5	169.5	1.04
95	245.0	230.9	1.06	195.4	188.5	1.04
96	266.2	251.2	1.06	215.1	207.9	1.03
97	287.6	272.3	1.06	235.6	228.4	1.03
98	309.7	293.8	1.05	256.6	249.7	1.03
99	332.5	315.7	1.05	278.0	271.8	1.02
100	355.8	337.8	1.05	299.7	294.5	1.02
101	379.4	359.8	1.05	321.5	317.6	1.01
102	403.2	381.6	1.06	344.0	340.8	1.01
103	427.1	403.0	1.06	366.9	364.0	1.01
104	450.9	423.8	1.06	390.1	386.8	1.01
105	474.4	443.8	1.07	413.3	409.2	1.01
110	583.3	1000.0	0.58	524.8	1000.0	0.52
115	664.6	1000.0	0.66	611.3	1000.0	0.61
120	700.0	1000.0	0.70	650.0	1000.0	0.65

Table 42 OAS Beneficiaries by Type of Benefit (as at 31 December 2019)

	Males			Females		
Age	without GIS	with GIS	Proportion with GIS	without GIS	with GIS	Proportion with GIS
65	143,121	42,770	23%	154,775	47,351	23%
66	146,568	40,713	22%	155,039	50,214	24%
67	136,617	46,712	25%	145,560	54,634	27%
68	130,202	47,450	27%	138,111	56,250	29%
69	126,321	48,434	28%	132,686	58,346	31%
70	126,122	48,040	28%	129,768	59,858	32%
71	123,156	47,252	28%	125,704	59,920	32%
72	125,764	47,588	27%	126,568	61,871	33%
73	112,136	42,873	28%	113,020	56,666	33%
74	93,403	37,964	29%	93,268	51,292	35%
75	89,055	36,570	29%	89,123	50,488	36%
76	84,360	34,895	29%	85,120	48,745	36%
77	75,852	33,238	30%	76,536	47,565	38%
78	66,646	30,659	32%	68,519	44,749	40%
79	60,493	29,325	33%	62,975	44,277	41%
80	54,885	27,073	33%	57,474	42,102	42%
81	50,360	25,498	34%	53,261	40,629	43%
82	44,654	23,252	34%	48,393	38,234	44%
83	41,372	21,783	34%	45,041	36,590	45%
84	37,254	19,538	34%	41,476	34,898	46%
85	33,045	17,677	35%	37,769	32,927	47%
86	29,540	15,997	35%	34,369	30,709	47%
87	26,591	14,586	35%	32,340	29,244	47%
88	23,533	12,139	34%	29,122	27,015	48%
89	19,769	10,863	35%	25,941	24,867	49%
90	15,503	8,570	36%	21,483	21,589	50%
91	12,716	6,936	35%	18,411	19,175	51%
92	9,946	5,496	36%	15,549	16,819	52%
93	7,589	4,182	36%	12,624	14,165	53%
94	5,739	3,127	35%	10,401	11,751	53%
95	4,128	2,272	36%	8,181	9,581	54%
96	2,871	1,551	35%	6,170	7,359	54%
97	1,986	1117	36%	4,515	5,873	57%
98	1273	727	36%	3,116	4,214	57%
99	776	514	40%	2,114	3,107	60%
100	388	306	44%	1099	1,986	64%
101	238	171	42%	734	1,303	64%
102	124	101	45%	416	795	66%
103	55	74	57%	208	567	73%
104	34	49	59%	163	346	68%
105+	38	58	60%	161	433	73%
Total	2,064,223	838,140	29%	2,207,303	1,248,504	36%

Table 43 Deaths by Type of Benefit (2019)

	Males			Females		
Age	without GIS	with GIS	Proportion with GIS	without GIS	with GIS	Proportion with GIS
65	1,477	811	35%	913	540	37%
66	1,579	964	38%	1,004	715	42%
67	1,548	1,060	41%	1,011	753	43%
68	1,576	1,194	43%	1,030	852	45%
69	1,745	1,233	41%	1,099	979	47%
70	1,933	1,294	40%	1,158	1,023	47%
71	1,963	1,462	43%	1,349	1,074	44%
72	2,196	1,510	41%	1,448	1,274	47%
73	2,039	1,448	42%	1,321	1,150	47%
74	2,044	1,430	41%	1,280	1,230	49%
75	2,033	1,439	41%	1,393	1,264	48%
76	2,228	1,518	41%	1,435	1,327	48%
77	2,253	1,503	40%	1,412	1,432	50%
78	2,222	1,575	41%	1,611	1,513	48%
79	2,250	1,619	42%	1,533	1,617	51%
80	2,367	1,622	41%	1,578	1,705	52%
81	2,402	1,634	40%	1,707	1,747	51%
82	2,467	1,679	40%	1,801	1,895	51%
83	2,609	1,720	40%	2,004	1,946	49%
84	2,588	1,695	40%	2,061	2,156	51%
85	2,683	1,713	39%	2,028	2,236	52%
86	2,828	1,756	38%	2,282	2,379	51%
87	2,807	1,667	37%	2,292	2,526	52%
88	2,910	1,704	37%	2,373	2,739	54%
89	2,640	1,582	37%	2,432	2,742	53%
90	2,391	1,452	38%	2,443	2,786	53%
91	2,274	1,307	36%	2,388	2,741	53%
92	1,884	1,143	38%	2,313	2,639	53%
93	1,726	999	37%	2,108	2,494	54%
94	1,401	783	36%	1,946	2,362	55%
95	1,142	632	36%	1,664	2,099	56%
96	923	478	34%	1,435	1,816	56%
97	684	368	35%	1,227	1560	56%
98	479	264	36%	877	1286	59%
99	318	190	37%	655	1013	61%
100	152	110	42%	408	734	64%
101	119	92	44%	266	453	63%
102	54	57	51%	171	362	68%
103	40	32	44%	128	242	65%
104	21	25	54%	71	171	71%
105+	22	30	58%	82	250	75%
Total	69,017	44,794	39%	57,737	61,822	52%

Table 44 Exposures by Type of Benefit (2019)

	Males			Females		
Age	without GIS	with GIS	Proportion with GIS	without GIS	with GIS	Proportion with GIS
65	150,921	41,264	21%	157,694	47,372	23%
66	148,438	43,622	23%	154,327	52,555	25%
67	136,475	47,486	26%	143,950	55,395	28%
68	131,013	48,454	27%	137,436	57,663	30%
69	127,749	48,957	28%	132,222	59,391	31%
70	126,699	48,131	28%	129,224	60,323	32%
71	125,231	47,950	28%	126,347	61,093	33%
72	124,186	46,739	27%	124,478	60,983	33%
73	103,309	41,051	28%	103,585	54,251	34%
74	92,738	37,979	29%	92,030	51,532	36%
75	88,430	36,615	29%	88,557	50,350	36%
76	82,395	34,798	30%	82,577	48,970	37%
77	72,755	32,727	31%	73,606	46,885	39%
78	65,565	31,007	32%	67,704	45,591	40%
79	58,904	28,948	33%	61,133	43,946	42%
80	54,334	27,199	33%	56,667	42,284	43%
81	49,099	25,383	34%	52,148	40,596	44%
82	44,336	23,204	34%	47,664	38,231	45%
83	40,997	21,670	35%	44,845	36,897	45%
84	36,645	19,541	35%	40,999	35,051	46%
85	32,784	17,762	35%	37,244	32,898	47%
86	29,788	16,154	35%	34,759	31,373	47%
87	26,437	14,375	35%	32,108	29,447	48%
88	23,301	12,287	35%	29,013	27,403	49%
89	19,148	10,596	36%	25,282	24,620	49%
90	15,304	8,465	36%	21,318	21,804	51%
91	12,599	6,909	35%	18,485	19,449	51%
92	9,688	5,430	36%	15,281	16,841	52%
93	7,520	4,111	35%	12,683	14,253	53%
94	5,646	3,073	35%	10,304	11,847	53%
95	4,053	2,231	36%	8,059	9,493	54%
96	2,846	1,541	35%	6,157	7,412	55%
97	1,987	1,098	36%	4,444	5,888	57%
98	1,236	744	38%	3,002	4,181	58%
99	743	501	40%	1,964	3,053	61%
100	377	268	42%	1,104	1,928	64%
101	241	172	42%	700	1,255	64%
102	107	108	50%	396	857	68%
103	60	80	57%	242	547	69%
104	40	49	55%	153	345	69%
105+	44	62	58%	166	437	72%
Total	2,054,167	838,743	29%	2,180,057	1,254,692	37%

Table 45 Graduated Mortality Rates and Ratios by Type of Benefit – Males (2019)

Age	Overall OAS (annual deaths per thousand)	without GIS (annual deaths per thousand)	Ratio without GIS to Overall	with GIS (annual deaths per thousand)	Ratio with GIS to Overall	Ratio with GIS to without GIS
65	12.0	9.8	0.82	20.0	1.67	2.04
66	13.0	10.5	0.81	21.1	1.62	2.02
67	14.1	11.3	0.80	22.4	1.59	1.98
68	15.4	12.3	0.80	23.9	1.55	1.94
69	16.7	13.4	0.80	25.5	1.53	1.91
70	18.1	14.6	0.81	27.4	1.51	1.87
71	19.7	16.0	0.81	29.4	1.49	1.84
72	21.5	17.5	0.81	31.7	1.47	1.81
73	23.5	19.3	0.82	34.1	1.45	1.76
74	25.8	21.4	0.83	36.6	1.42	1.71
75	28.4	23.8	0.84	39.4	1.39	1.66
76	31.3	26.5	0.85	42.4	1.35	1.60
77	34.7	29.7	0.86	45.7	1.32	1.54
78	38.4	33.3	0.87	49.3	1.28	1.48
79	42.7	37.5	0.88	53.4	1.25	1.43
80	47.5	42.2	0.89	58.0	1.22	1.37
81	52.9	47.7	0.90	63.2	1.19	1.33
82	59.1	53.9	0.91	69.0	1.17	1.28
83	66.2	61.1	0.92	75.7	1.14	1.24
84	74.3	69.4	0.93	83.4	1.12	1.20
85	83.6	78.9	0.94	92.2	1.10	1.17
86	94.1	89.7	0.95	102.2	1.09	1.14
87	106.0	101.8	0.96	113.5	1.07	1.12
88	119.2	115.2	0.97	126.2	1.06	1.10
89	133.8	130.0	0.97	140.3	1.05	1.08
90	149.7	146.2	0.98	155.6	1.04	1.06
91	166.8	163.7	0.98	172.1	1.03	1.05
92	185.1	182.4	0.99	189.7	1.02	1.04
93	204.3	202.1	0.99	208.2	1.02	1.03
94	224.4	222.7	0.99	227.6	1.01	1.02
95	245.0	244.0	1.00	247.6	1.01	1.01
96	266.2	265.8	1.00	268.0	1.01	1.01
97	287.6	287.6	1.00	288.7	1.00	1.00
98	309.7	309.7	1.00	310.2	1.00	1.00
99	332.5	332.5	1.00	332.5	1.00	1.00
100	355.8	355.8	1.00	355.8	1.00	1.00
101	379.4	379.4	1.00	379.4	1.00	1.00
102	403.2	403.2	1.00	403.2	1.00	1.00
103	427.1	427.1	1.00	427.1	1.00	1.00
104	450.9	450.9	1.00	450.9	1.00	1.00
105	474.4	474.4	1.00	474.4	1.00	1.00
110	583.3	583.3	1.00	583.3	1.00	1.00
115	664.6	664.6	1.00	664.6	1.00	1.00
120	700.0	700.0	1.00	700.0	1.00	1.00

Table 46 Graduated Mortality Rates and Ratios by Type of Benefit – Females (2019)

Age	Overall OAS (annual deaths per thousand)	without GIS (annual deaths per thousand)	Ratio without GIS to Overall	with GIS (annual deaths per thousand)	Ratio with GIS to Overall	Ratio with GIS to without GIS
65	7.2	5.9	0.81	11.9	1.64	2.02
66	8.0	6.3	0.79	12.8	1.60	2.02
67	8.8	6.9	0.78	13.8	1.56	2.00
68	9.7	7.6	0.78	14.8	1.53	1.95
69	10.7	8.4	0.78	15.9	1.49	1.90
70	11.7	9.2	0.79	17.0	1.45	1.84
71	12.9	10.2	0.80	18.3	1.42	1.79
72	14.2	11.3	0.80	19.7	1.39	1.74
73	15.6	12.6	0.81	21.3	1.37	1.70
74	17.2	14.0	0.81	23.1	1.34	1.66
75	19.0	15.6	0.82	25.1	1.32	1.61
76	21.2	17.4	0.82	27.3	1.29	1.57
77	23.6	19.6	0.83	29.8	1.26	1.52
78	26.3	22.2	0.84	32.5	1.24	1.47
79	29.4	25.1	0.85	35.6	1.21	1.42
80	33.0	28.5	0.86	39.0	1.18	1.37
81	37.0	32.4	0.88	42.9	1.16	1.33
82	41.6	36.8	0.89	47.4	1.14	1.29
83	46.8	41.9	0.89	52.7	1.13	1.26
84	52.9	47.6	0.90	58.9	1.11	1.24
85	59.8	54.2	0.91	66.0	1.10	1.22
86	67.7	61.9	0.91	74.2	1.10	1.20
87	76.9	70.8	0.92	83.5	1.09	1.18
88	87.3	81.1	0.93	93.8	1.07	1.16
89	99.0	93.1	0.94	105.2	1.06	1.13
90	112.0	106.6	0.95	117.6	1.05	1.10
91	126.4	121.6	0.96	130.9	1.04	1.08
92	141.9	138.0	0.97	145.4	1.02	1.05
93	158.7	155.7	0.98	161.0	1.01	1.03
94	176.5	174.5	0.99	177.9	1.01	1.02
95	195.4	194.2	0.99	195.9	1.00	1.01
96	215.1	214.7	1.00	215.2	1.00	1.00
97	235.6	235.6	1.00	235.6	1.00	1.00
98	256.6	256.6	1.00	256.6	1.00	1.00
99	278.0	278.0	1.00	278.1	1.00	1.00
100	299.7	299.7	1.00	300.0	1.00	1.00
101	321.5	321.5	1.00	322.0	1.00	1.00
102	344.0	344.0	1.00	344.7	1.00	1.00
103	366.9	366.9	1.00	367.7	1.00	1.00
104	390.1	390.1	1.00	391.0	1.00	1.00
105	413.3	413.3	1.00	414.3	1.00	1.00
110	524.8	524.8	1.00	525.6	1.00	1.00
115	611.3	611.3	1.00	611.6	1.00	1.00
120	650.0	650.0	1.00	650.0	1.00	1.00

Table 47 Life Table of OAS Beneficiaries without GIS (2019)

	Males				Females			
Age	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$
65	100,000	9.8	978	20.33	100,000	5.9	587	23.16
66	99,022	10.5	1,038	19.53	99,413	6.3	630	22.29
67	97,984	11.3	1,108	18.73	98,783	6.9	682	21.43
68	96,875	12.3	1,189	17.94	98,101	7.6	743	20.58
69	95,686	13.4	1,280	17.15	97,357	8.4	813	19.73
70	94,406	14.6	1,379	16.38	96,544	9.2	892	18.89
71	93,027	16.0	1,486	15.62	95,652	10.2	980	18.06
72	91,541	17.5	1,605	14.86	94,672	11.3	1,074	17.25
73	89,936	19.3	1,737	14.12	93,598	12.6	1,177	16.44
74	88,198	21.4	1,885	13.38	92,421	14.0	1,290	15.64
75	86,313	23.8	2,050	12.67	91,131	15.6	1,418	14.86
76	84,263	26.5	2,234	11.96	89,713	17.4	1,563	14.08
77	82,029	29.7	2,436	11.27	88,150	19.6	1,728	13.32
78	79,593	33.3	2,652	10.60	86,422	22.2	1,914	12.58
79	76,941	37.5	2,883	9.95	84,507	25.1	2,121	11.85
80	74,058	42.2	3,127	9.32	82,387	28.5	2,347	11.15
81	70,932	47.7	3,381	8.71	80,040	32.4	2,592	10.46
82	67,551	53.9	3,643	8.12	77,448	36.8	2,851	9.79
83	63,908	61.1	3,908	7.55	74,597	41.9	3,122	9.15
84	60,000	69.4	4,166	7.01	71,475	47.6	3,402	8.52
85	55,834	78.9	4,406	6.50	68,073	54.2	3,689	7.92
86	51,428	89.7	4,612	6.01	64,383	61.9	3,983	7.35
87	46,816	101.8	4,764	5.56	60,401	70.8	4,275	6.80
88	42,053	115.2	4,845	5.13	56,125	81.1	4,554	6.28
89	37,208	130.0	4,838	4.73	51,571	93.1	4,800	5.79
90	32,369	146.2	4,733	4.37	46,771	106.6	4,984	5.34
91	27,636	163.7	4,524	4.03	41,787	121.6	5,080	4.91
92	23,113	182.4	4,215	3.72	36,707	138.0	5,065	4.52
93	18,898	202.1	3,819	3.44	31,642	155.7	4,926	4.17
94	15,079	222.7	3,358	3.18	26,717	174.5	4,661	3.84
95	11,721	244.0	2,860	2.95	22,056	194.2	4,283	3.55
96	8,861	265.8	2,355	2.74	17,773	214.7	3,816	3.28
97	6,506	287.6	1,871	2.55	13,957	235.6	3,288	3.05
98	4,635	309.7	1,436	2.37	10,669	256.6	2,738	2.83
99	3,199	332.5	1,064	2.22	7,932	278.0	2,205	2.64
100	2,135	355.8	760	2.07	5,726	299.7	1,716	2.46
101	1,376	379.4	522	1.94	4,010	321.5	1,289	2.30
102	854	403.2	344	1.82	2,721	344.0	936	2.15
103	509	427.1	218	1.71	1,785	366.9	655	2.01
104	292	450.9	132	1.61	1,130	390.1	441	1.89
105	160	474.4	76	1.52	689	413.3	285	1.77
110	4	583.3	2	1.18	32	524.8	17	1.35
115	0	664.6	0	0.99	1	611.3	0	1.12
120	0	700.0	0	0.80	0	650.0	0	0.85

Table 48 Life Table of OAS Beneficiaries with GIS (2019)

	Males				Females			
Age	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$
65	100,000	20.0	1,999	17.40	100,000	11.9	1,187	20.68
66	98,001	21.1	2,070	16.74	98,813	12.8	1,267	19.93
67	95,931	22.4	2,150	16.10	97,546	13.8	1,346	19.18
68	93,782	23.9	2,237	15.45	96,200	14.8	1,425	18.44
69	91,544	25.5	2,334	14.82	94,775	15.9	1,505	17.71
70	89,210	27.4	2,441	14.19	93,270	17.0	1,589	16.99
71	86,769	29.4	2,554	13.58	91,682	18.3	1,679	16.27
72	84,215	31.7	2,668	12.97	90,003	19.7	1,777	15.57
73	81,546	34.1	2,779	12.38	88,226	21.3	1,883	14.87
74	78,767	36.6	2,885	11.80	86,343	23.1	1,996	14.18
75	75,883	39.4	2,987	11.23	84,346	25.1	2,117	13.51
76	72,896	42.4	3,087	10.67	82,229	27.3	2,246	12.84
77	69,808	45.7	3,187	10.12	79,982	29.8	2,383	12.19
78	66,621	49.3	3,286	9.58	77,600	32.5	2,524	11.55
79	63,334	53.4	3,383	9.05	75,076	35.6	2,671	10.92
80	59,951	58.0	3,477	8.54	72,404	39.0	2,825	10.30
81	56,474	63.2	3,568	8.03	69,579	42.9	2,986	9.70
82	52,906	69.0	3,653	7.54	66,593	47.4	3,160	9.11
83	49,253	75.7	3,731	7.06	63,433	52.7	3,344	8.54
84	45,522	83.4	3,797	6.60	60,089	58.9	3,538	7.99
85	41,725	92.2	3,846	6.15	56,551	66.0	3,733	7.46
86	37,879	102.2	3,871	5.73	52,818	74.2	3,919	6.95
87	34,008	113.5	3,861	5.32	48,898	83.5	4,082	6.47
88	30,147	126.2	3,805	4.94	44,817	93.8	4,205	6.01
89	26,342	140.3	3,695	4.58	40,612	105.2	4,272	5.58
90	22,647	155.6	3,524	4.25	36,340	117.6	4,272	5.18
91	19,124	172.1	3,291	3.94	32,068	130.9	4,199	4.80
92	15,832	189.7	3,003	3.65	27,869	145.4	4,052	4.45
93	12,829	208.2	2,672	3.39	23,817	161.0	3,835	4.13
94	10,157	227.6	2,312	3.15	19,982	177.9	3,554	3.82
95	7,846	247.6	1,943	2.93	16,428	195.9	3,219	3.54
96	5,903	268.0	1,582	2.73	13,209	215.2	2,842	3.28
97	4,321	288.7	1,247	2.54	10,366	235.6	2,442	3.04
98	3,073	310.2	953	2.37	7,924	256.6	2,033	2.83
99	2,120	332.5	705	2.22	5,891	278.1	1,638	2.63
100	1,415	355.8	504	2.07	4,253	300.0	1,276	2.45
101	912	379.4	346	1.94	2,977	322.0	959	2.29
102	566	403.2	228	1.82	2,018	344.7	696	2.14
103	338	427.1	144	1.71	1,323	367.7	486	2.01
104	193	450.9	87	1.61	836	391.0	327	1.88
105	106	474.4	50	1.52	509	414.3	211	1.77
110	3	583.3	2	1.18	23	525.6	12	1.35
115	0	664.6	0	0.99	0	611.6	0	1.12
120	0	700.0	0	0.80	0	650.0	0	0.85

Table 49 OAS Beneficiaries by Marital Status and Type of Benefit – Males (2019)

	Overall OAS		without GIS				with GIS			
Age	Married	Single	Married	Single	%Married	%Single	Married	Single	%Married	%Single
65	130,588	55,303	108,950	34,171	76%	24%	21,638	21,132	51%	49%
66	132,091	55,190	112,560	34,008	77%	23%	19,531	21,182	48%	52%
67	129,809	53,520	106,259	30,358	78%	22%	23,550	23,162	50%	50%
68	127,332	50,320	102,543	27,659	79%	21%	24,789	22,661	52%	48%
69	125,775	48,980	99,892	26,429	79%	21%	25,883	22,551	53%	47%
70	126,451	47,711	100,375	25,747	80%	20%	26,076	21,964	54%	46%
71	124,389	46,019	98,534	24,622	80%	20%	25,855	21,397	55%	45%
72	127,314	46,038	100,810	24,954	80%	20%	26,504	21,084	56%	44%
73	114,170	40,839	90,048	22,088	80%	20%	24,122	18,751	56%	44%
74	96,326	35,041	74,460	18,943	80%	20%	21,866	16,098	58%	42%
75	92,364	33,261	71,126	17,929	80%	20%	21,238	15,332	58%	42%
76	87,685	31,570	67,092	17,268	80%	20%	20,593	14,302	59%	41%
77	80,081	29,009	60,077	15,775	79%	21%	20,004	13,234	60%	40%
78	70,701	26,604	52,293	14,353	78%	22%	18,408	12,251	60%	40%
79	64,997	24,821	47,060	13,433	78%	22%	17,937	11,388	61%	39%
80	59,049	22,909	42,426	12,459	77%	23%	16,623	10,450	61%	39%
81	54,102	21,756	38,232	12,128	76%	24%	15,870	9,628	62%	38%
82	47,615	20,291	33,279	11,375	75%	25%	14,336	8,916	62%	38%
83	43,570	19,585	30,388	10,984	73%	27%	13,182	8,601	61%	39%
84	38,471	18,321	26,727	10,527	72%	28%	11,744	7,794	60%	40%
85	33,616	17,106	23,040	10,005	70%	30%	10,576	7,101	60%	40%
86	29,330	16,207	19,917	9,623	67%	33%	9,413	6,584	59%	41%
87	25,710	15,467	17,461	9,130	66%	34%	8,249	6,337	57%	43%
88	21,487	14,185	14,765	8,768	63%	37%	6,722	5,417	55%	45%
89	17,843	12,789	11,993	7,776	61%	39%	5,850	5,013	54%	46%
90	13,246	10,827	8,811	6,692	57%	43%	4,435	4,135	52%	48%
91	10,211	9,441	6,837	5,879	54%	46%	3,374	3,562	49%	51%
92	7,561	7,881	5,015	4,931	50%	50%	2,546	2,950	46%	54%
93	5,454	6,317	3,588	4,001	47%	53%	1,866	2,316	45%	55%
94	3,727	5,139	2,410	3,329	42%	58%	1317	1,810	42%	58%
95	2,497	3,903	1,646	2,482	40%	60%	851	1,421	37%	63%
96	1,605	2,817	1040	1831	36%	64%	565	986	36%	64%
97	1016	2,087	669	1317	34%	66%	347	770	31%	69%
98	645	1355	414	859	33%	67%	231	496	32%	68%
99	359	931	220	556	28%	72%	139	375	27%	73%
100	177	517	102	286	26%	74%	75	231	25%	75%
101	93	316	56	182	24%	76%	37	134	22%	78%
102	36	189	24	100	19%	81%	12	89	12%	88%
103	24	105	6	49	11%	89%	18	56	24%	76%
104	13	70	9	25	26%	74%	4	45	8%	92%
105+	19	77	7	31	18%	82%	12	46	21%	79%
Total	2,047,549	854,814	1,581,161	483,062	77%	23%	466,388	371,752	56%	44%

Table 50 OAS Beneficiaries by Marital Status and Type of Benefit – Females (2019)

	Overall OAS		without GIS				with GIS			
Age	Married	Single	Married	Single	%Married	%Single	Married	Single	%Married	%Single
65	129,958	72,168	110,105	44,670	71%	29%	19,853	27,498	42%	58%
66	130,079	75,174	109,428	45,611	71%	29%	20,651	29,563	41%	59%
67	125,452	74,742	102,980	42,580	71%	29%	22,472	32,162	41%	59%
68	120,308	74,053	97,375	40,736	71%	29%	22,933	33,317	41%	59%
69	116,288	74,744	92,492	40,194	70%	30%	23,796	34,550	41%	59%
70	113,797	75,829	89,897	39,871	69%	31%	23,900	35,958	40%	60%
71	109,688	75,936	86,013	39,691	68%	32%	23,675	36,245	40%	60%
72	109,109	79,330	85,028	41,540	67%	33%	24,081	37,790	39%	61%
73	95,967	73,719	74,431	38,589	66%	34%	21,536	35,130	38%	62%
74	78,846	65,714	59,743	33,525	64%	36%	19,103	32,189	37%	63%
75	74,015	65,596	55,837	33,286	63%	37%	18,178	32,310	36%	64%
76	68,483	65,382	51,415	33,705	60%	40%	17,068	31,677	35%	65%
77	60,899	63,202	44,775	31,761	59%	41%	16,124	31,441	34%	66%
78	53,300	59,968	38,865	29,654	57%	43%	14,435	30,314	32%	68%
79	47,570	59,682	34,012	28,963	54%	46%	13,558	30,719	31%	69%
80	42,010	57,566	29,749	27,725	52%	48%	12,261	29,841	29%	71%
81	36,862	57,028	25,763	27,498	48%	52%	11,099	29,530	27%	73%
82	31,559	55,068	21,913	26,480	45%	55%	9,646	28,588	25%	75%
83	27,570	54,061	18,972	26,069	42%	58%	8,598	27,992	23%	77%
84	23,441	52,933	16,071	25,405	39%	61%	7,370	27,528	21%	79%
85	19,586	51,110	13,361	24,408	35%	65%	6,225	26,702	19%	81%
86	16,403	48,675	11,225	23,144	33%	67%	5,178	25,531	17%	83%
87	13,396	48,188	9,063	23,277	28%	72%	4,333	24,911	15%	85%
88	10,722	45,415	7,356	21,766	25%	75%	3,366	23,649	12%	88%
89	8,411	42,397	5,772	20,169	22%	78%	2,639	22,228	11%	89%
90	5,979	37,093	4,014	17,469	19%	81%	1,965	19,624	9%	91%
91	4,438	33,148	2,996	15,415	16%	84%	1,442	17,733	8%	92%
92	3,141	29,227	2,124	13,425	14%	86%	1,017	15,802	6%	94%
93	2,092	24,697	1,469	11,155	12%	88%	623	13,542	4%	96%
94	1,430	20,722	990	9,411	10%	90%	440	11,311	4%	96%
95	881	16,881	623	7,558	8%	92%	258	9,323	3%	97%
96	603	12,926	423	5747	7%	93%	180	7179	2%	98%
97	342	10,046	239	4276	5%	95%	103	5770	2%	98%
98	182	7148	135	2981	4%	96%	47	4167	1%	99%
99	103	5118	69	2045	3%	97%	34	3073	1%	99%
100	50	3035	38	1061	3%	97%	12	1974	1%	99%
101	23	2014	18	716	2%	98%	5	1298	0%	100%
102	11	1200	4	412	1%	99%	7	788	1%	99%
103	7	768	5	203	2%	98%	2	565	0%	100%
104	3	506	3	160	2%	98%	0	346	0%	100%
105+	4	590	2	159	1%	99%	2	431	0%	100%
Total	1,683,008	1,772,799	1,304,793	902,510	59%	41%	378,215	870,289	30%	70%

Table 51 Deaths by Marital Status and Type of Benefit – Males (2019)

	Overall OAS		without GIS				with GIS			
Age	Married	Single	Married	Single	%Married	%Single	Married	Single	%Married	%Single
65	1,076	1212	885	592	60%	40%	191	620	24%	76%
66	1,242	1,301	979	600	62%	38%	263	701	27%	73%
67	1,282	1326	975	573	63%	37%	307	753	29%	71%
68	1,448	1322	1039	537	66%	34%	409	785	34%	66%
69	1,647	1331	1,180	565	68%	32%	467	766	38%	62%
70	1,769	1,458	1,331	602	69%	31%	438	856	34%	66%
71	1,924	1,501	1,377	586	70%	30%	547	915	37%	63%
72	2,067	1,639	1,525	671	69%	31%	542	968	36%	64%
73	2,026	1,461	1,407	632	69%	31%	619	829	43%	57%
74	2,084	1,390	1,466	578	72%	28%	618	812	43%	57%
75	2,032	1,440	1,363	670	67%	33%	669	770	46%	54%
76	2,246	1,500	1,537	691	69%	31%	709	809	47%	53%
77	2,315	1,441	1,599	654	71%	29%	716	787	48%	52%
78	2,269	1,528	1,527	695	69%	31%	742	833	47%	53%
79	2,393	1,476	1,583	667	70%	30%	810	809	50%	50%
80	2,463	1,526	1,631	736	69%	31%	832	790	51%	49%
81	2,457	1,579	1,631	771	68%	32%	826	808	51%	49%
82	2,531	1,615	1,656	811	67%	33%	875	804	52%	48%
83	2,652	1,677	1,769	840	68%	32%	883	837	51%	49%
84	2,587	1,696	1,680	908	65%	35%	907	788	54%	46%
85	2,563	1,833	1,700	983	63%	37%	863	850	50%	50%
86	2,592	1,992	1,712	1116	61%	39%	880	876	50%	50%
87	2,476	1,998	1,668	1,139	59%	41%	808	859	48%	52%
88	2,458	2,156	1,654	1256	57%	43%	804	900	47%	53%
89	2,194	2,028	1,440	1200	55%	45%	754	828	48%	52%
90	1,927	1,916	1,256	1135	53%	47%	671	781	46%	54%
91	1,681	1,900	1,095	1179	48%	52%	586	721	45%	55%
92	1,296	1,731	841	1043	45%	55%	455	688	40%	60%
93	1098	1,627	697	1029	40%	60%	401	598	40%	60%
94	830	1354	535	866	38%	62%	295	488	38%	62%
95	677	1097	433	709	38%	62%	244	388	39%	61%
96	441	960	282	641	31%	69%	159	319	33%	67%
97	332	720	218	466	32%	68%	114	254	31%	69%
98	242	501	170	309	35%	65%	72	192	27%	73%
99	134	374	88	230	28%	72%	46	144	24%	76%
100	58	204	39	113	26%	74%	19	91	17%	83%
101	50	161	32	87	27%	73%	18	74	20%	80%
102	28	83	14	40	26%	74%	14	43	25%	75%
103	13	59	6	34	15%	85%	7	25	22%	78%
104	7	39	2	19	10%	90%	5	20	20%	80%
105+	7	45	2	20	9%	91%	5	25	17%	83%
Total	61,614	52,197	42,024	26,993	61%	39%	19,590	25,204	44%	56%

Table 52 Deaths by Marital Status and Type of Benefit – Females (2019)

	Overall OAS		without GIS				with GIS			
Age	Married	Single	Married	Single	%Married	%Single	Married	Single	%Married	%Single
65	698	755	555	358	61%	39%	143	397	26%	74%
66	838	881	631	373	63%	37%	207	508	29%	71%
67	803	961	592	419	59%	41%	211	542	28%	72%
68	883	999	633	397	61%	39%	250	602	29%	71%
69	947	1131	653	446	59%	41%	294	685	30%	70%
70	1,020	1,161	709	449	61%	39%	311	712	30%	70%
71	1,114	1,309	819	530	61%	39%	295	779	27%	73%
72	1,158	1,564	827	621	57%	43%	331	943	26%	74%
73	1,088	1,383	773	548	59%	41%	315	835	27%	73%
74	1,057	1,453	725	555	57%	43%	332	898	27%	73%
75	1,098	1,559	748	645	54%	46%	350	914	28%	72%
76	1,120	1,642	757	678	53%	47%	363	964	27%	73%
77	1,031	1,813	686	726	49%	51%	345	1087	24%	76%
78	1,179	1,945	765	846	47%	53%	414	1099	27%	73%
79	1,037	2,113	676	857	44%	56%	361	1256	22%	78%
80	1,099	2,184	703	875	45%	55%	396	1309	23%	77%
81	1,044	2,410	664	1043	39%	61%	380	1367	22%	78%
82	1,097	2,599	666	1135	37%	63%	431	1464	23%	77%
83	1,045	2,905	681	1323	34%	66%	364	1582	19%	81%
84	1,026	3,191	633	1428	31%	69%	393	1763	18%	82%
85	935	3,329	585	1443	29%	71%	350	1886	16%	84%
86	928	3,733	577	1705	25%	75%	351	2028	15%	85%
87	844	3,974	549	1,743	24%	76%	295	2231	12%	88%
88	817	4,295	514	1859	22%	78%	303	2436	11%	89%
89	705	4,469	454	1978	19%	81%	251	2491	9%	91%
90	625	4,604	403	2040	16%	84%	222	2564	8%	92%
91	509	4,620	333	2055	14%	86%	176	2565	6%	94%
92	412	4,540	275	2038	12%	88%	137	2502	5%	95%
93	325	4,277	215	1893	10%	90%	110	2384	4%	96%
94	226	4082	155	1791	8%	92%	71	2291	3%	97%
95	168	3595	110	1554	7%	93%	58	2041	3%	97%
96	124	3127	75	1360	5%	95%	49	1767	3%	97%
97	75	2712	51	1176	4%	96%	24	1536	2%	98%
98	59	2104	38	839	4%	96%	21	1265	2%	98%
99	38	1630	27	628	4%	96%	11	1002	1%	99%
100	12	1130	10	398	2%	98%	2	732	0%	100%
101	7	712	6	260	2%	98%	1	452	0%	100%
102	1	532	1	170	1%	99%	0	362	0%	100%
103	4	366	3	125	2%	98%	1	241	0%	100%
104	0	242	0	71	0%	100%	0	171	0%	100%
105+	0	332	0	82	0%	100%	0	250	0%	100%
Total	27,196	92,363	18,277	39,460	32%	68%	8,919	52,903	14%	86%

Table 53 Exposures by Marital Status and Type of Benefit – Males (2019)

	Overall OAS		without GIS				with GIS			
Age	Married	Single	Married	Single	%Married	%Single	Married	Single	%Married	%Single
65	135,501	56,685	115,220	35,701	76%	24%	20,280	20,984	49%	51%
66	135,671	56,389	114,395	34,043	77%	23%	21,276	22,346	49%	51%
67	130,760	53,201	106,551	29,924	78%	22%	24,209	23,277	51%	49%
68	128,599	50,868	103,129	27,884	79%	21%	25,470	22,984	53%	47%
69	127,428	49,277	101,133	26,616	79%	21%	26,296	22,661	54%	46%
70	126,984	47,846	100,934	25,764	80%	20%	26,050	22,081	54%	46%
71	126,401	46,781	100,112	25,120	80%	20%	26,289	21,661	55%	45%
72	125,416	45,509	99,469	24,718	80%	20%	25,947	20,792	56%	44%
73	105,726	38,634	82,494	20,815	80%	20%	23,232	17,819	57%	43%
74	95,733	34,984	73,915	18,823	80%	20%	21,819	16,161	57%	43%
75	91,717	33,328	70,363	18,067	80%	20%	21,354	15,261	58%	42%
76	86,025	31,169	65,375	17,021	79%	21%	20,650	14,148	59%	41%
77	76,800	28,683	57,205	15,551	79%	21%	19,595	13,132	60%	40%
78	69,727	26,845	51,095	14,470	78%	22%	18,632	12,375	60%	40%
79	63,368	24,484	45,675	13,229	78%	22%	17,693	11,255	61%	39%
80	58,322	23,212	41,591	12,743	77%	23%	16,731	10,469	62%	38%
81	52,543	21,939	36,910	12,189	75%	25%	15,634	9,750	62%	38%
82	46,911	20,628	32,769	11,567	74%	26%	14,142	9,061	61%	39%
83	42,752	19,916	29,706	11,291	72%	28%	13,045	8,625	60%	40%
84	37,712	18,474	25,997	10,648	71%	29%	11,715	7,826	60%	40%
85	32,850	17,696	22,372	10,411	68%	32%	10,477	7,284	59%	41%
86	29,149	16,793	19,830	9,958	67%	33%	9,319	6,835	58%	42%
87	24,990	15,822	16,988	9,448	64%	36%	8,002	6,373	56%	44%
88	21,042	14,546	14,392	8,909	62%	38%	6,650	5,637	54%	46%
89	16,841	12,904	11,272	7,876	59%	41%	5,568	5,028	53%	47%
90	12,782	10,987	8,498	6,806	56%	44%	4,284	4,181	51%	49%
91	9,806	9,702	6,537	6,062	52%	48%	3,269	3,640	47%	53%
92	7,188	7,930	4,725	4,963	49%	51%	2,463	2,967	45%	55%
93	5,154	6,477	3,369	4,151	45%	55%	1,785	2,326	43%	57%
94	3,542	5,177	2,303	3,342	41%	59%	1,239	1,834	40%	60%
95	2,394	3,890	1,562	2,491	39%	61%	832	1,399	37%	63%
96	1,527	2,861	1,002	1,844	35%	65%	525	1,017	34%	66%
97	992	2,092	654	1,333	33%	67%	338	759	31%	69%
98	628	1,352	400	836	32%	68%	227	517	31%	69%
99	330	915	208	535	28%	72%	122	379	24%	76%
100	160	485	97	281	26%	74%	64	205	24%	76%
101	82	331	51	189	21%	79%	30	142	18%	82%
102	38	178	19	88	18%	82%	19	90	17%	83%
103	25	114	8	51	14%	86%	17	63	21%	79%
104	15	73	8	31	21%	79%	7	42	14%	86%
105+	23	83	12	33	26%	74%	11	51	18%	82%
Total	2,033,652	859,258	1,568,346	485,821	76%	24%	465,306	373,437	55%	45%

Table 54 Exposures by Marital Status and Type of Benefit – Females (2019)

	Overall OAS		without GIS				with GIS			
Age	Married	Single	Married	Single	%Married	%Single	Married	Single	%Married	%Single
65	130,651	74,415	111,165	46,529	70%	30%	19,486	27,886	41%	59%
66	130,086	76,796	108,524	45,803	70%	30%	21,563	30,992	41%	59%
67	124,116	75,229	101,472	42,478	70%	30%	22,644	32,751	41%	59%
68	119,806	75,293	96,309	41,127	70%	30%	23,497	34,166	41%	59%
69	115,823	75,791	91,844	40,378	69%	31%	23,978	35,413	40%	60%
70	112,837	76,710	88,944	40,280	69%	31%	23,893	36,430	40%	60%
71	109,656	77,784	85,649	40,698	68%	32%	24,007	37,085	39%	61%
72	106,158	79,302	82,792	41,686	67%	33%	23,367	37,616	38%	62%
73	87,861	69,974	67,440	36,145	65%	35%	20,422	33,829	38%	62%
74	77,213	66,349	58,352	33,678	63%	37%	18,861	32,671	37%	63%
75	72,489	66,418	54,561	33,996	62%	38%	17,928	32,422	36%	64%
76	65,951	65,596	49,075	33,503	59%	41%	16,877	32,094	34%	66%
77	58,056	62,434	42,552	31,054	58%	42%	15,504	31,380	33%	67%
78	51,914	61,382	37,519	30,185	55%	45%	14,395	31,196	32%	68%
79	45,515	59,564	32,309	28,824	53%	47%	13,206	30,740	30%	70%
80	40,450	58,501	28,517	28,150	50%	50%	11,934	30,351	28%	72%
81	35,180	57,564	24,461	27,686	47%	53%	10,719	29,877	26%	74%
82	30,304	55,590	20,878	26,786	44%	56%	9,426	28,804	25%	75%
83	26,449	55,292	18,216	26,628	41%	59%	8,233	28,664	22%	78%
84	22,285	53,765	15,215	25,784	37%	63%	7,070	27,981	20%	80%
85	18,625	51,517	12,714	24,529	34%	66%	5,910	26,987	18%	82%
86	15,619	50,513	10,595	24,165	30%	70%	5,025	26,348	16%	84%
87	12,670	48,885	8,596	23,511	27%	73%	4,074	25,373	14%	86%
88	10,114	46,302	6,931	22,082	24%	76%	3,182	24,220	12%	88%
89	7,714	42,188	5,244	20,038	21%	79%	2,470	22,151	10%	90%
90	5,545	37,577	3,725	17,593	17%	83%	1,819	19,984	8%	92%
91	4,154	33,780	2,806	15,680	15%	85%	1,349	18,100	7%	93%
92	2,864	29,258	1,966	13,314	13%	87%	897	15,944	5%	95%
93	1,946	24,990	1,349	11,334	11%	89%	597	13,656	4%	96%
94	1,301	20,851	902	9,402	9%	91%	399	11,449	3%	97%
95	831	16,721	595	7,464	7%	93%	236	9,257	2%	98%
96	540	13,030	372	5,786	6%	94%	168	7,244	2%	98%
97	306	10,026	221	4,223	5%	95%	85	5,803	1%	99%
98	166	7,018	117	2,885	4%	96%	48	4,133	1%	99%
99	95	4,923	65	1,900	3%	97%	30	3,023	1%	99%
100	45	2,988	35	1,069	3%	97%	10	1,919	0%	100%
101	17	1,938	10	690	1%	99%	7	1,248	1%	99%
102	11	1,242	6	390	1%	99%	5	852	1%	99%
103	6	783	5	236	2%	98%	1	546	0%	100%
104	4	495	3	150	2%	98%	1	345	0%	100%
105+	3	600	1	165	1%	99%	2	435	0%	100%
Total	1,645,376	1,789,372	1,272,052	908,005	58%	42%	373,324	881,367	30%	70%

Table 55 Graduated Mortality Rates and Ratios by Marital Status – Males (2019)

Age	Overall OAS (annual deaths per thousand)	Married (annual deaths per thousand)	Ratio Married to Overall	Single (annual deaths per thousand)	Ratio Single to Overall	Ratio Single to Married
65	12.0	8.0	0.67	21.4	1.79	2.68
66	13.0	9.0	0.69	22.7	1.74	2.52
67	14.1	10.1	0.71	24.1	1.71	2.40
68	15.4	11.2	0.73	25.7	1.68	2.30
69	16.7	12.4	0.75	27.6	1.65	2.22
70	18.1	13.8	0.76	29.6	1.63	2.15
71	19.7	15.2	0.77	31.9	1.62	2.10
72	21.5	16.8	0.78	34.3	1.59	2.04
73	23.5	18.6	0.79	36.9	1.57	1.98
74	25.8	20.7	0.80	39.8	1.54	1.92
75	28.4	23.0	0.81	42.9	1.51	1.86
76	31.3	25.8	0.82	46.3	1.48	1.79
77	34.7	28.9	0.83	50.0	1.44	1.73
78	38.4	32.5	0.84	54.0	1.41	1.66
79	42.7	36.5	0.86	58.5	1.37	1.60
80	47.5	41.1	0.87	63.4	1.33	1.54
81	52.9	46.3	0.87	68.8	1.30	1.49
82	59.1	52.2	0.88	74.9	1.27	1.43
83	66.2	59.0	0.89	81.9	1.24	1.39
84	74.3	66.6	0.90	89.9	1.21	1.35
85	83.6	75.3	0.90	99.1	1.19	1.32
86	94.1	85.2	0.90	109.4	1.16	1.28
87	106.0	96.2	0.91	121.0	1.14	1.26
88	119.2	108.6	0.91	133.8	1.12	1.23
89	133.8	122.4	0.91	147.8	1.11	1.21
90	149.7	137.4	0.92	163.0	1.09	1.19
91	166.8	153.8	0.92	179.4	1.08	1.17
92	185.1	171.6	0.93	196.9	1.06	1.15
93	204.3	190.8	0.93	215.1	1.05	1.13
94	224.4	211.3	0.94	234.0	1.04	1.11
95	245.0	232.8	0.95	253.4	1.03	1.09
96	266.2	255.2	0.96	273.0	1.03	1.07
97	287.6	278.4	0.97	293.6	1.02	1.05
98	309.7	302.1	0.98	315.0	1.02	1.04
99	332.5	326.3	0.98	337.1	1.01	1.03
100	355.8	350.8	0.99	359.8	1.01	1.03
101	379.4	375.5	0.99	382.9	1.01	1.02
102	403.2	400.2	0.99	406.2	1.01	1.01
103	427.1	424.9	0.99	429.6	1.01	1.01
104	450.9	449.3	1.00	452.9	1.00	1.01
105	474.4	473.4	1.00	476.1	1.00	1.01
110	583.3	583.3	1.00	583.9	1.00	1.00
115	664.6	664.6	1.00	664.6	1.00	1.00
120	700.0	700.0	1.00	700.0	1.00	1.00

Table 56 Graduated Mortality Rates and Ratios by Marital Status – Females (2019)

Age	Overall OAS (annual deaths per thousand)	Married (annual deaths per thousand)	Ratio Married to Overall	Single (annual deaths per thousand)	Ratio Single to Overall	Ratio Single to Married
65	7.2	5.5	0.76	10.3	1.42	1.88
66	8.0	6.1	0.76	11.3	1.41	1.87
67	8.8	6.7	0.76	12.4	1.40	1.85
68	9.7	7.4	0.76	13.4	1.38	1.82
69	10.7	8.1	0.76	14.5	1.36	1.78
70	11.7	9.0	0.77	15.7	1.34	1.75
71	12.9	9.9	0.77	17.0	1.32	1.71
72	14.2	11.0	0.78	18.4	1.30	1.67
73	15.6	12.2	0.78	19.9	1.28	1.63
74	17.2	13.5	0.78	21.6	1.25	1.60
75	19.0	15.0	0.79	23.5	1.23	1.57
76	21.2	16.7	0.79	25.7	1.21	1.54
77	23.6	18.6	0.79	28.1	1.19	1.51
78	26.3	20.9	0.79	30.9	1.17	1.48
79	29.4	23.4	0.80	34.0	1.15	1.45
80	33.0	26.4	0.80	37.5	1.14	1.42
81	37.0	29.8	0.81	41.4	1.12	1.39
82	41.6	33.8	0.81	45.8	1.10	1.35
83	46.8	38.5	0.82	50.8	1.09	1.32
84	52.9	44.0	0.83	56.6	1.07	1.29
85	59.8	50.4	0.84	63.2	1.06	1.25
86	67.7	58.0	0.86	70.8	1.05	1.22
87	76.9	66.8	0.87	79.6	1.04	1.19
88	87.3	76.9	0.88	89.6	1.03	1.16
89	99.0	88.4	0.89	100.9	1.02	1.14
90	112.0	101.7	0.91	113.6	1.01	1.12
91	126.4	116.7	0.92	127.6	1.01	1.09
92	141.9	133.2	0.94	142.9	1.01	1.07
93	158.7	151.1	0.95	159.4	1.00	1.05
94	176.5	170.3	0.96	177.1	1.00	1.04
95	195.4	190.6	0.98	195.8	1.00	1.03
96	215.1	211.8	0.98	215.6	1.00	1.02
97	235.6	234.0	0.99	236.2	1.00	1.01
98	256.6	256.6	1.00	257.3	1.00	1.00
99	278.0	278.0	1.00	278.8	1.00	1.00
100	299.7	299.7	1.00	300.5	1.00	1.00
101	321.5	321.5	1.00	322.2	1.00	1.00
102	344.0	344.0	1.00	344.5	1.00	1.00
103	366.9	366.9	1.00	367.3	1.00	1.00
104	390.1	390.1	1.00	390.4	1.00	1.00
105	413.3	413.3	1.00	413.6	1.00	1.00
110	524.8	524.8	1.00	524.8	1.00	1.00
115	611.3	611.3	1.00	611.3	1.00	1.00
120	650.0	650.0	1.00	650.0	1.00	1.00

Table 57 Life Table of OAS Married Beneficiaries (2019)

	Males				Females			
Age	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$
65	100,000	8.0	797	20.73	100,000	5.5	549	23.52
66	99,203	9.0	891	19.89	99,451	6.1	602	22.65
67	98,312	10.1	989	19.06	98,849	6.7	660	21.78
68	97,323	11.2	1,092	18.25	98,189	7.4	723	20.92
69	96,232	12.4	1,198	17.45	97,466	8.1	793	20.07
70	95,034	13.8	1,308	16.67	96,673	9.0	870	19.24
71	93,726	15.2	1,424	15.89	95,803	9.9	953	18.41
72	92,302	16.8	1,550	15.13	94,850	11.0	1,044	17.59
73	90,752	18.6	1,689	14.38	93,807	12.2	1,143	16.78
74	89,063	20.7	1,841	13.64	92,664	13.5	1,251	15.98
75	87,222	23.0	2,010	12.92	91,413	15.0	1,371	15.19
76	85,212	25.8	2,196	12.21	90,042	16.7	1,503	14.41
77	83,016	28.9	2,399	11.52	88,539	18.6	1,650	13.65
78	80,617	32.5	2,617	10.85	86,890	20.9	1,813	12.90
79	78,000	36.5	2,848	10.20	85,077	23.4	1,993	12.16
80	75,152	41.1	3,088	9.57	83,084	26.4	2,192	11.44
81	72,064	46.3	3,337	8.96	80,893	29.8	2,411	10.74
82	68,727	52.2	3,590	8.37	78,482	33.8	2,653	10.05
83	65,137	59.0	3,841	7.80	75,829	38.5	2,917	9.39
84	61,296	66.6	4,083	7.26	72,912	44.0	3,205	8.74
85	57,213	75.3	4,309	6.74	69,707	50.4	3,514	8.12
86	52,904	85.2	4,505	6.25	66,193	58.0	3,838	7.52
87	48,399	96.2	4,658	5.78	62,355	66.8	4,165	6.96
88	43,741	108.6	4,752	5.34	58,189	76.9	4,476	6.42
89	38,989	122.4	4,770	4.93	53,713	88.4	4,748	5.91
90	34,218	137.4	4,702	4.55	48,964	101.7	4,979	5.44
91	29,516	153.8	4,540	4.20	43,985	116.7	5,132	5.00
92	24,976	171.6	4,286	3.87	38,853	133.2	5,175	4.59
93	20,690	190.8	3,947	3.57	33,678	151.1	5,089	4.22
94	16,743	211.3	3,538	3.29	28,590	170.3	4,868	3.88
95	13,205	232.8	3,075	3.04	23,721	190.6	4,521	3.58
96	10,131	255.2	2,586	2.81	19,201	211.8	4,068	3.30
97	7,545	278.4	2,100	2.61	15,133	234.0	3,540	3.05
98	5,445	302.1	1,645	2.42	11,593	256.6	2,975	2.83
99	3,800	326.3	1,240	2.25	8,618	278.0	2,396	2.64
100	2,560	350.8	898	2.09	6,222	299.7	1,865	2.46
101	1,662	375.5	624	1.95	4,357	321.5	1,401	2.30
102	1,038	400.2	415	1.83	2,956	344.0	1,017	2.15
103	623	424.9	265	1.71	1,939	366.9	712	2.01
104	358	449.3	161	1.61	1,228	390.1	479	1.89
105	197	473.4	93	1.52	749	413.3	310	1.77
110	5	583.3	3	1.18	34	524.8	18	1.35
115	0	664.6	0	0.99	1	611.3	0	1.12
120	0	700.0	0	0.80	0	650.0	0	0.85

Table 58 Life Table of OAS Single Beneficiaries (2019)

	Males				Females			
Age	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$
65	100,000	21.4	2,138	16.79	100,000	10.3	1,032	21.13
66	97,862	22.7	2,218	16.14	98,968	11.3	1,121	20.35
67	95,644	24.1	2,307	15.51	97,848	12.4	1,209	19.57
68	93,337	25.7	2,403	14.88	96,639	13.4	1,296	18.81
69	90,934	27.6	2,508	14.26	95,343	14.5	1,384	18.06
70	88,425	29.6	2,620	13.65	93,959	15.7	1,475	17.32
71	85,805	31.9	2,735	13.05	92,483	17.0	1,571	16.59
72	83,070	34.3	2,850	12.46	90,913	18.4	1,670	15.87
73	80,220	36.9	2,962	11.89	89,242	19.9	1,775	15.15
74	77,258	39.8	3,072	11.32	87,467	21.6	1,887	14.45
75	74,186	42.9	3,180	10.77	85,580	23.5	2,010	13.76
76	71,006	46.3	3,285	10.23	83,570	25.7	2,144	13.08
77	67,722	50.0	3,385	9.70	81,425	28.1	2,290	12.41
78	64,337	54.0	3,477	9.19	79,135	30.9	2,445	11.75
79	60,860	58.5	3,559	8.68	76,690	34.0	2,607	11.11
80	57,301	63.4	3,630	8.19	74,083	37.5	2,775	10.48
81	53,671	68.8	3,691	7.71	71,309	41.4	2,949	9.87
82	49,979	74.9	3,744	7.24	68,359	45.8	3,130	9.28
83	46,236	81.9	3,786	6.79	65,229	50.8	3,316	8.70
84	42,449	89.9	3,816	6.35	61,913	56.6	3,504	8.14
85	38,633	99.1	3,827	5.93	58,409	63.2	3,692	7.60
86	34,806	109.4	3,808	5.53	54,717	70.8	3,874	7.08
87	30,997	121.0	3,750	5.14	50,843	79.6	4,045	6.58
88	27,247	133.8	3,645	4.78	46,798	89.6	4,192	6.10
89	23,602	147.8	3,489	4.44	42,606	100.9	4,300	5.65
90	20,113	163.0	3,279	4.13	38,306	113.6	4,352	5.23
91	16,834	179.4	3,021	3.84	33,954	127.6	4,333	4.84
92	13,813	196.9	2,719	3.57	29,622	142.9	4,232	4.47
93	11,094	215.1	2,387	3.32	25,390	159.4	4,046	4.13
94	8,707	234.0	2,038	3.09	21,343	177.1	3,779	3.82
95	6,669	253.4	1,690	2.88	17,564	195.8	3,440	3.54
96	4,979	273.0	1,359	2.69	14,125	215.6	3,045	3.28
97	3,620	293.6	1,063	2.51	11,079	236.2	2,616	3.04
98	2,557	315.0	806	2.34	8,463	257.3	2,178	2.82
99	1,752	337.1	591	2.19	6,285	278.8	1,752	2.63
100	1,161	359.8	418	2.05	4,533	300.5	1,362	2.45
101	743	382.9	285	1.92	3,171	322.2	1,021	2.29
102	459	406.2	186	1.81	2,149	344.5	740	2.15
103	272	429.6	117	1.70	1,409	367.3	517	2.01
104	155	452.9	70	1.60	891	390.4	348	1.89
105	85	476.1	40	1.51	543	413.6	225	1.77
110	2	583.9	1	1.18	25	524.8	13	1.35
115	0	664.6	0	0.99	0	611.3	0	1.12
120	0	700.0	0	0.80	0	650.0	0	0.85

Table 59 Graduated Mortality Rates by Age, Marital Status and Type of Benefit – Males (2019)

		Without GIS				With GIS			
	Overall OAS	Married	Ratio Married to Overall	Single	Ratio Single to Overall	Married	Ratio Married to Overall	Single	Ratio Single to Overall
Age	(annual deaths per thousand)	(annual deaths per thousand)		(annual deaths per thousand)		(annual deaths per thousand)		(annual deaths per thousand)	
65	12.0	7.6	0.64	16.6	1.39	9.9	0.83	29.4	2.46
66	13.0	8.4	0.65	17.4	1.34	11.7	0.90	30.4	2.34
67	14.1	9.3	0.66	18.4	1.30	13.3	0.94	31.7	2.25
68	15.4	10.3	0.67	19.5	1.27	15.0	0.97	33.4	2.18
69	16.7	11.4	0.68	20.8	1.25	16.6	0.99	35.5	2.13
70	18.1	12.6	0.69	22.4	1.24	18.3	1.01	37.9	2.09
71	19.7	13.9	0.70	24.3	1.23	20.2	1.03	40.6	2.05
72	21.5	15.3	0.71	26.6	1.24	22.4	1.04	43.2	2.01
73	23.5	16.8	0.72	29.1	1.24	24.9	1.06	45.9	1.95
74	25.8	18.7	0.72	32.0	1.24	27.5	1.07	48.8	1.89
75	28.4	20.8	0.73	35.1	1.24	30.3	1.07	51.8	1.83
76	31.3	23.3	0.74	38.5	1.23	33.3	1.06	55.3	1.77
77	34.7	26.3	0.76	42.1	1.22	36.5	1.05	59.2	1.71
78	38.4	29.7	0.77	46.0	1.20	40.0	1.04	63.5	1.65
79	42.7	33.7	0.79	50.3	1.18	43.9	1.03	68.1	1.60
80	47.5	38.2	0.81	55.2	1.16	48.2	1.02	73.2	1.54
81	52.9	43.5	0.82	60.6	1.15	53.2	1.00	78.9	1.49
82	59.1	49.4	0.84	66.9	1.13	58.7	0.99	85.1	1.44
83	66.2	56.3	0.85	74.1	1.12	65.0	0.98	92.1	1.39
84	74.3	64.1	0.86	82.5	1.11	72.2	0.97	100.0	1.35
85	83.6	72.9	0.87	92.1	1.10	80.4	0.96	108.9	1.30
86	94.1	82.9	0.88	102.9	1.09	89.8	0.95	118.9	1.26
87	106.0	94.1	0.89	115.0	1.09	100.6	0.95	129.9	1.23
88	119.2	106.6	0.89	128.3	1.08	112.8	0.95	142.0	1.19
89	133.8	120.3	0.90	142.9	1.07	126.3	0.94	155.2	1.16
90	149.7	135.4	0.90	158.7	1.06	141.2	0.94	169.5	1.13
91	166.8	151.8	0.91	175.6	1.05	157.4	0.94	184.8	1.11
92	185.1	169.7	0.92	193.7	1.05	174.9	0.95	201.0	1.09
93	204.3	188.9	0.92	212.9	1.04	193.7	0.95	218.1	1.07
94	224.4	209.3	0.93	233.1	1.04	213.8	0.95	235.9	1.05
95	245.0	230.8	0.94	254.1	1.04	235.4	0.96	254.4	1.04
96	266.2	253.1	0.95	275.9	1.04	258.5	0.97	273.3	1.03
97	287.6	276.2	0.96	298.4	1.04	282.2	0.98	293.3	1.02
98	309.7	299.9	0.97	321.3	1.04	306.4	0.99	314.2	1.01
99	332.5	324.1	0.97	344.6	1.04	330.9	1.00	336.0	1.01
100	355.8	348.6	0.98	368.2	1.03	355.6	1.00	358.3	1.01
101	379.4	373.3	0.98	391.9	1.03	379.4	1.00	381.1	1.00
102	403.2	398.2	0.99	415.6	1.03	403.2	1.00	404.2	1.00
103	427.1	422.9	0.99	439.2	1.03	427.1	1.00	427.5	1.00
104	450.9	447.4	0.99	462.5	1.03	450.9	1.00	450.9	1.00
105	474.4	471.6	0.99	485.4	1.02	474.4	1.00	474.4	1.00
110	583.3	582.7	1.00	590.2	1.01	583.3	1.00	583.3	1.00
115	664.6	664.6	1.00	666.9	1.00	664.6	1.00	664.6	1.00
120	700.0	700.0	1.00	700.0	1.00	700.0	1.00	700.0	1.00

Table 60 Graduated Mortality Rates by Age, Marital Status and Type of Benefit – Females (2019)

		Without GIS				With GIS			
	Overall OAS	Married	Ratio Married to Overall	Single	Ratio Single to Overall	Married	Ratio Married to Overall	Single	Ratio Single to Overall
Age	(annual deaths per thousand)	(annual deaths per thousand)		(annual deaths per thousand)		(annual deaths per thousand)		(annual deaths per thousand)	
65	7.2	5.1	0.70	7.7	1.06	7.8	1.08	14.7	2.02
66	8.0	5.5	0.68	8.4	1.05	8.9	1.11	15.6	1.95
67	8.8	6.0	0.67	9.1	1.04	9.8	1.11	16.6	1.88
68	9.7	6.6	0.68	9.9	1.02	10.7	1.10	17.6	1.82
69	10.7	7.3	0.68	10.8	1.01	11.5	1.08	18.8	1.77
70	11.7	8.1	0.69	11.7	1.00	12.3	1.05	20.1	1.72
71	12.9	9.0	0.70	12.8	0.99	13.2	1.03	21.6	1.68
72	14.2	10.1	0.71	13.9	0.98	14.3	1.01	23.1	1.63
73	15.6	11.2	0.72	15.3	0.98	15.6	1.00	24.8	1.59
74	17.2	12.4	0.72	16.8	0.98	17.1	0.99	26.6	1.54
75	19.0	13.7	0.72	18.6	0.98	18.9	0.99	28.5	1.50
76	21.2	15.2	0.72	20.7	0.98	21.0	0.99	30.7	1.45
77	23.6	16.9	0.72	23.2	0.98	23.3	0.99	33.0	1.40
78	26.3	18.9	0.72	26.1	0.99	25.9	0.98	35.6	1.35
79	29.4	21.2	0.72	29.3	1.00	28.8	0.98	38.5	1.31
80	33.0	23.9	0.73	32.9	1.00	32.3	0.98	41.7	1.26
81	37.0	27.1	0.73	37.0	1.00	36.2	0.98	45.3	1.23
82	41.6	30.8	0.74	41.6	1.00	40.7	0.98	49.6	1.19
83	46.8	35.2	0.75	46.6	1.00	45.9	0.98	54.7	1.17
84	52.9	40.4	0.76	52.2	0.99	51.9	0.98	60.6	1.15
85	59.8	46.5	0.78	58.4	0.98	58.8	0.98	67.6	1.13
86	67.7	53.9	0.80	65.5	0.97	66.7	0.98	75.6	1.12
87	76.9	62.4	0.81	73.9	0.96	75.6	0.98	84.8	1.10
88	87.3	72.4	0.83	83.7	0.96	85.6	0.98	95.0	1.09
89	99.0	83.8	0.85	95.1	0.96	96.7	0.98	106.2	1.07
90	112.0	97.1	0.87	108.3	0.97	109.6	0.98	118.4	1.06
91	126.4	112.0	0.89	123.0	0.97	124.2	0.98	131.6	1.04
92	141.9	128.6	0.91	139.2	0.98	140.3	0.99	145.9	1.03
93	158.7	146.5	0.92	156.7	0.99	157.8	0.99	161.4	1.02
94	176.5	165.8	0.94	175.4	0.99	176.6	1.00	178.1	1.01
95	195.4	186.2	0.95	195.0	1.00	195.9	1.00	196.2	1.00
96	215.1	207.6	0.97	215.4	1.00	215.2	1.00	215.5	1.00
97	235.6	229.8	0.98	236.5	1.00	235.6	1.00	235.8	1.00
98	256.6	252.8	0.99	258.0	1.01	256.6	1.00	257.0	1.00
99	278.0	276.4	0.99	279.9	1.01	278.1	1.00	278.7	1.00
100	299.7	299.7	1.00	301.9	1.01	300.0	1.00	300.7	1.00
101	321.5	321.5	1.00	324.0	1.01	322.0	1.00	322.7	1.00
102	344.0	344.0	1.00	346.6	1.01	344.7	1.00	345.3	1.00
103	366.9	366.9	1.00	369.6	1.01	367.7	1.00	368.4	1.00
104	390.1	390.1	1.00	392.9	1.01	391.0	1.00	391.6	1.00
105	413.3	413.3	1.00	416.1	1.01	414.3	1.00	415.0	1.00
110	524.8	524.8	1.00	526.8	1.00	525.6	1.00	526.0	1.00
115	611.3	611.3	1.00	612.0	1.00	611.6	1.00	611.8	1.00
120	650.0	650.0	1.00	650.0	1.00	650.0	1.00	650.0	1.00

Table 61 Life Table of OAS Married Beneficiaries without GIS (2019)

	Males				Females			
Age	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$
65	100,000	7.6	764	21.15	100,000	5.1	510	24.04
66	99,236	8.4	835	20.31	99,490	5.5	545	23.16
67	98,400	9.3	916	19.47	98,945	6.0	589	22.29
68	97,484	10.3	1,005	18.65	98,356	6.6	644	21.42
69	96,479	11.4	1,101	17.84	97,711	7.3	711	20.56
70	95,377	12.6	1,202	17.04	97,001	8.1	787	19.70
71	94,175	13.9	1,306	16.25	96,214	9.0	870	18.86
72	92,869	15.3	1,417	15.47	95,344	10.1	959	18.03
73	91,452	16.8	1,540	14.71	94,385	11.2	1,053	17.21
74	89,912	18.7	1,677	13.95	93,331	12.4	1,153	16.40
75	88,235	20.8	1,834	13.21	92,178	13.7	1,262	15.59
76	86,401	23.3	2,015	12.48	90,917	15.2	1,381	14.80
77	84,386	26.3	2,218	11.76	89,536	16.9	1,515	14.02
78	82,168	29.7	2,443	11.07	88,021	18.9	1,665	13.26
79	79,725	33.7	2,686	10.39	86,356	21.2	1,833	12.50
80	77,039	38.2	2,946	9.73	84,522	23.9	2,021	11.76
81	74,093	43.5	3,220	9.10	82,501	27.1	2,233	11.04
82	70,873	49.4	3,504	8.49	80,268	30.8	2,470	10.33
83	67,369	56.3	3,792	7.91	77,799	35.2	2,735	9.64
84	63,577	64.1	4,075	7.35	75,064	40.4	3,029	8.98
85	59,502	72.9	4,340	6.82	72,035	46.5	3,352	8.33
86	55,162	82.9	4,575	6.31	68,683	53.9	3,699	7.72
87	50,587	94.1	4,761	5.84	64,984	62.4	4,058	7.13
88	45,826	106.6	4,883	5.40	60,926	72.4	4,412	6.57
89	40,943	120.3	4,925	4.98	56,514	83.8	4,736	6.04
90	36,018	135.4	4,876	4.59	51,778	97.1	5,026	5.55
91	31,142	151.8	4,728	4.23	46,752	112.0	5,238	5.09
92	26,414	169.7	4,483	3.90	41,514	128.6	5,337	4.67
93	21,931	188.9	4,144	3.60	36,177	146.5	5,301	4.29
94	17,787	209.3	3,723	3.32	30,876	165.8	5,119	3.94
95	14,063	230.8	3,245	3.06	25,757	186.2	4,796	3.62
96	10,818	253.1	2,738	2.83	20,961	207.6	4,351	3.33
97	8,080	276.2	2,231	2.62	16,610	229.8	3,818	3.08
98	5,849	299.9	1,754	2.43	12,792	252.8	3,234	2.85
99	4,095	324.1	1,327	2.26	9,558	276.4	2,641	2.64
100	2,768	348.6	965	2.11	6,917	299.7	2,073	2.46
101	1,803	373.3	673	1.97	4,844	321.5	1,557	2.30
102	1,130	398.2	450	1.84	3,286	344.0	1,130	2.15
103	680	422.9	288	1.72	2,156	366.9	791	2.01
104	392	447.4	176	1.62	1,365	390.1	532	1.89
105	217	471.6	102	1.53	833	413.3	344	1.77
110	6	582.7	3	1.18	38	524.8	20	1.35
115	0	664.6	0	0.99	1	611.3	0	1.12
120	0	700.0	0	0.80	0	650.0	0	0.85

Table 62 Life Table of OAS Married Beneficiaries with GIS (2019)

	Males				Females			
Age	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$
65	100,000	9.9	994	19.49	100,000	7.8	779	22.19
66	99,006	11.7	1,155	18.68	99,221	8.9	880	21.36
67	97,851	13.3	1,304	17.89	98,341	9.8	967	20.55
68	96,547	15.0	1,444	17.13	97,374	10.7	1,043	19.75
69	95,103	16.6	1,578	16.38	96,331	11.5	1,110	18.96
70	93,526	18.3	1,713	15.65	95,221	12.3	1,174	18.17
71	91,813	20.2	1,859	14.93	94,047	13.2	1,242	17.39
72	89,954	22.4	2,019	14.23	92,805	14.3	1,324	16.62
73	87,935	24.9	2,189	13.54	91,481	15.6	1,423	15.85
74	85,746	27.5	2,362	12.88	90,058	17.1	1,541	15.10
75	83,384	30.3	2,531	12.23	88,517	18.9	1,674	14.35
76	80,854	33.3	2,694	11.59	86,842	21.0	1,820	13.62
77	78,160	36.5	2,853	10.98	85,022	23.3	1,978	12.90
78	75,307	40.0	3,011	10.37	83,044	25.9	2,149	12.19
79	72,296	43.9	3,172	9.78	80,895	28.8	2,333	11.50
80	69,124	48.2	3,334	9.21	78,562	32.3	2,534	10.83
81	65,790	53.2	3,497	8.65	76,028	36.2	2,751	10.17
82	62,293	58.7	3,658	8.11	73,278	40.7	2,983	9.54
83	58,635	65.0	3,814	7.58	70,294	45.9	3,228	8.92
84	54,821	72.2	3,960	7.08	67,067	51.9	3,481	8.33
85	50,862	80.4	4,091	6.59	63,586	58.8	3,738	7.75
86	46,771	89.8	4,202	6.12	59,847	66.7	3,990	7.21
87	42,569	100.6	4,282	5.67	55,857	75.6	4,222	6.69
88	38,287	112.8	4,317	5.25	51,635	85.6	4,420	6.19
89	33,970	126.3	4,292	4.86	47,215	96.7	4,564	5.73
90	29,678	141.2	4,192	4.49	42,651	109.6	4,673	5.28
91	25,486	157.4	4,013	4.14	37,977	124.2	4,715	4.87
92	21,474	174.9	3,756	3.82	33,262	140.3	4,666	4.49
93	17,718	193.7	3,432	3.53	28,597	157.8	4,512	4.14
94	14,286	213.8	3,055	3.26	24,084	176.6	4,253	3.83
95	11,231	235.4	2,644	3.01	19,831	195.9	3,886	3.54
96	8,587	258.5	2,220	2.78	15,945	215.2	3,431	3.28
97	6,367	282.2	1,797	2.57	12,514	235.6	2,948	3.04
98	4,570	306.4	1,400	2.39	9,566	256.6	2,455	2.83
99	3,170	330.9	1,049	2.22	7,112	278.1	1,978	2.63
100	2,121	355.6	754	2.07	5,134	300.0	1,540	2.45
101	1,367	379.4	519	1.94	3,594	322.0	1,157	2.29
102	848	403.2	342	1.82	2,436	344.7	840	2.14
103	506	427.1	216	1.71	1,597	367.7	587	2.01
104	290	450.9	131	1.61	1,010	391.0	395	1.88
105	159	474.4	76	1.52	615	414.3	255	1.77
110	4	583.3	2	1.18	28	525.6	15	1.35
115	0	664.6	0	0.99	0	611.6	0	1.12
120	0	700.0	0	0.80	0	650.0	0	0.85

Table 63 Life Table of OAS Single Beneficiaries without GIS (2019)

	Males				Females			
Age	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$
65	100,000	16.6	1,663	18.14	100,000	7.7	770	22.29
66	98,337	17.4	1,711	17.43	99,230	8.4	834	21.45
67	96,626	18.4	1,773	16.73	98,396	9.1	900	20.63
68	94,853	19.5	1,848	16.04	97,496	9.9	969	19.82
69	93,005	20.8	1,938	15.35	96,527	10.8	1,042	19.01
70	91,067	22.4	2,044	14.66	95,485	11.7	1,120	18.21
71	89,024	24.3	2,167	13.99	94,365	12.8	1,206	17.42
72	86,857	26.6	2,309	13.32	93,159	13.9	1,299	16.64
73	84,548	29.1	2,464	12.67	91,860	15.3	1,402	15.87
74	82,084	32.0	2,627	12.04	90,458	16.8	1,520	15.11
75	79,456	35.1	2,793	11.42	88,939	18.6	1,655	14.36
76	76,664	38.5	2,953	10.82	87,284	20.7	1,810	13.62
77	73,710	42.1	3,106	10.23	85,474	23.2	1,984	12.90
78	70,605	46.0	3,251	9.66	83,490	26.1	2,176	12.19
79	67,354	50.3	3,391	9.10	81,315	29.3	2,382	11.51
80	63,962	55.2	3,529	8.56	78,933	32.9	2,600	10.84
81	60,434	60.6	3,664	8.03	76,333	37.0	2,828	10.19
82	56,769	66.9	3,798	7.51	73,505	41.6	3,058	9.56
83	52,971	74.1	3,927	7.02	70,448	46.6	3,284	8.96
84	49,044	82.5	4,047	6.54	67,164	52.2	3,503	8.37
85	44,997	92.1	4,144	6.08	63,661	58.4	3,716	7.80
86	40,853	102.9	4,205	5.65	59,944	65.5	3,928	7.26
87	36,648	115.0	4,215	5.24	56,016	73.9	4,138	6.73
88	32,433	128.3	4,162	4.86	51,878	83.7	4,341	6.23
89	28,271	142.9	4,039	4.50	47,537	95.1	4,522	5.75
90	24,232	158.7	3,845	4.16	43,015	108.3	4,657	5.30
91	20,387	175.6	3,581	3.85	38,357	123.0	4,718	4.89
92	16,806	193.7	3,255	3.57	33,639	139.2	4,683	4.50
93	13,551	212.9	2,885	3.31	28,956	156.7	4,539	4.15
94	10,666	233.1	2,486	3.06	24,417	175.4	4,283	3.83
95	8,180	254.1	2,079	2.84	20,134	195.0	3,926	3.53
96	6,101	275.9	1,684	2.64	16,208	215.4	3,492	3.27
97	4,418	298.4	1,318	2.46	12,716	236.5	3,007	3.03
98	3,100	321.3	996	2.29	9,709	258.0	2,505	2.81
99	2,104	344.6	725	2.14	7,204	279.9	2,016	2.62
100	1,379	368.2	508	2.00	5,188	301.9	1,566	2.44
101	871	391.9	341	1.87	3,622	324.0	1,173	2.28
102	530	415.6	220	1.76	2,448	346.6	849	2.13
103	310	439.2	136	1.66	1,600	369.6	591	2.00
104	174	462.5	80	1.56	1,008	392.9	396	1.87
105	93	485.4	45	1.48	612	416.1	255	1.76
110	2	590.2	1	1.16	27	526.8	14	1.35
115	0	666.9	0	0.99	0	612.0	0	1.12
120	0	700.0	0	0.80	0	650.0	0	0.85

Table 64 Life Table of OAS Single Beneficiaries with GIS (2019)

	Males				Females			
Age	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$
65	100,000	29.4	2,942	15.29	100,000	14.7	1,466	19.96
66	97,058	30.4	2,950	14.74	98,534	15.6	1,535	19.25
67	94,108	31.7	2,986	14.18	96,999	16.6	1,607	18.55
68	91,122	33.4	3,048	13.63	95,392	17.6	1,683	17.85
69	88,075	35.5	3,129	13.09	93,709	18.8	1,765	17.16
70	84,945	37.9	3,223	12.55	91,944	20.1	1,851	16.48
71	81,722	40.6	3,314	12.03	90,093	21.6	1,944	15.81
72	78,408	43.2	3,390	11.51	88,149	23.1	2,039	15.15
73	75,018	45.9	3,446	11.01	86,110	24.8	2,135	14.50
74	71,572	48.8	3,490	10.52	83,975	26.6	2,232	13.85
75	68,082	51.8	3,530	10.03	81,743	28.5	2,331	13.22
76	64,552	55.3	3,570	9.55	79,411	30.7	2,434	12.59
77	60,982	59.2	3,609	9.08	76,977	33.0	2,541	11.97
78	57,374	63.5	3,641	8.62	74,436	35.6	2,651	11.36
79	53,733	68.1	3,662	8.17	71,786	38.5	2,762	10.76
80	50,071	73.2	3,668	7.73	69,023	41.7	2,877	10.17
81	46,403	78.9	3,659	7.30	66,146	45.3	2,999	9.60
82	42,744	85.1	3,637	6.88	63,147	49.6	3,133	9.03
83	39,108	92.1	3,601	6.48	60,013	54.7	3,281	8.47
84	35,507	100.0	3,550	6.08	56,732	60.6	3,440	7.93
85	31,957	108.9	3,480	5.71	53,293	67.6	3,602	7.41
86	28,478	118.9	3,385	5.34	49,690	75.6	3,758	6.92
87	25,093	129.9	3,260	4.99	45,932	84.8	3,894	6.44
88	21,833	142.0	3,101	4.67	42,038	95.0	3,992	5.99
89	18,732	155.2	2,908	4.36	38,046	106.2	4,040	5.57
90	15,824	169.5	2,682	4.06	34,006	118.4	4,026	5.17
91	13,141	184.8	2,428	3.79	29,980	131.6	3,945	4.80
92	10,713	201.0	2,153	3.54	26,035	145.9	3,798	4.45
93	8,560	218.1	1,867	3.30	22,237	161.4	3,589	4.12
94	6,693	235.9	1,579	3.08	18,648	178.1	3,322	3.82
95	5,114	254.4	1,301	2.88	15,326	196.2	3,007	3.54
96	3,813	273.3	1,042	2.69	12,319	215.5	2,655	3.28
97	2,771	293.3	813	2.52	9,665	235.8	2,279	3.04
98	1,958	314.2	615	2.35	7,386	257.0	1,898	2.82
99	1,343	336.0	451	2.20	5,488	278.7	1,529	2.63
100	892	358.3	320	2.06	3,958	300.7	1,190	2.45
101	572	381.1	218	1.93	2,768	322.7	893	2.29
102	354	404.2	143	1.81	1,875	345.3	647	2.14
103	211	427.5	90	1.71	1,227	368.4	452	2.00
104	121	450.9	54	1.61	775	391.6	304	1.88
105	66	474.4	31	1.52	472	415.0	196	1.77
110	2	583.3	1	1.18	21	526.0	11	1.35
115	0	664.6	0	0.99	0	611.8	0	1.12
120	0	700.0	0	0.80	0	650.0	0	0.85

Table 65 OAS Beneficiaries by Place of Birth (2019)

	Males			Females		
Age	Born in Canada	Born Outside Canada	Proportion Born Outside Canada	Born in Canada	Born Outside Canada	Proportion Born Outside Canada
65	160,474	25,417	14%	170,283	31,843	16%
66	156,415	30,866	16%	166,472	38,781	19%
67	148,172	35,157	19%	158,447	41,747	21%
68	141,940	35,712	20%	152,380	41,981	22%
69	137,479	37,276	21%	147,772	43,260	23%
70	132,856	41,306	24%	142,753	46,873	25%
71	122,791	47,617	28%	134,073	51,551	28%
72	124,577	48,775	28%	135,927	52,512	28%
73	109,716	45,293	29%	120,354	49,332	29%
74	93,624	37,743	29%	103,282	41,278	29%
75	87,632	37,993	30%	98,159	41,452	30%
76	84,758	34,497	29%	96,166	37,699	28%
77	77,007	32,083	29%	88,240	35,861	29%
78	68,002	29,303	30%	80,338	32,930	29%
79	61,200	28,618	32%	73,740	33,512	31%
80	55,146	26,812	33%	67,759	31,817	32%
81	50,454	25,404	33%	63,813	30,077	32%
82	44,668	23,238	34%	58,149	28,478	33%
83	41,353	21,802	35%	55,165	26,466	32%
84	36,939	19,853	35%	51,951	24,423	32%
85	32,989	17,733	35%	48,173	22,523	32%
86	29,538	15,999	35%	44,673	20,405	31%
87	26,822	14,355	35%	42,960	18,624	30%
88	23,454	12,218	34%	39,401	16,736	30%
89	19,641	10,991	36%	35,264	15,544	31%
90	15,286	8,787	37%	29,895	13,177	31%
91	12,529	7,123	36%	25,795	11,791	31%
92	9,699	5,743	37%	21,950	10,418	32%
93	7,377	4,394	37%	17,937	8,852	33%
94	5,549	3,317	37%	14,812	7,340	33%
95	4,001	2,399	37%	11,949	5,813	33%
96	2,688	1,734	39%	9,116	4,413	33%
97	1,939	1,164	38%	7,192	3,196	31%
98	1,216	784	39%	5,152	2,178	30%
99	784	506	39%	3,621	1,600	31%
100	443	251	36%	2,213	872	28%
101	255	154	38%	1,502	535	26%
102	145	80	36%	922	289	24%
103	65	64	50%	549	226	29%
104	41	42	51%	368	141	28%
105+	35	61	64%	377	217	37%
Total	2,129,699	772,664	27%	2,529,044	926,763	27%

Table 66 OAS Beneficiary Deaths by Place of Birth (2019)

	Males			Females		
Age	Born in Canada	Born Outside Canada	Proportion Born Outside Canada	Born in Canada	Born Outside Canada	Proportion Born Outside Canada
65	2,068	220	10%	1,294	159	11%
66	2,232	311	12%	1,487	232	13%
67	2,251	357	14%	1,509	255	14%
68	2,353	417	15%	1,613	269	14%
69	2,517	461	15%	1,769	309	15%
70	2,611	616	19%	1,787	394	18%
71	2,707	718	21%	1,956	467	19%
72	2,872	834	23%	2,181	541	20%
73	2,765	722	21%	1,950	521	21%
74	2,647	827	24%	1,983	527	21%
75	2,703	769	22%	2,029	628	24%
76	2,903	843	23%	2,172	590	21%
77	2,889	867	23%	2,256	588	21%
78	2,919	878	23%	2,424	700	22%
79	2,835	1,034	27%	2,354	796	25%
80	2,911	1,078	27%	2,525	758	23%
81	2,901	1,135	28%	2,587	867	25%
82	2,946	1,200	29%	2,723	973	26%
83	3,006	1,323	31%	2,919	1,031	26%
84	3,053	1,230	29%	3,059	1,158	27%
85	3,043	1,353	31%	3,117	1,147	27%
86	3,196	1,388	30%	3,420	1,241	27%
87	3,120	1,354	30%	3,602	1,216	25%
88	3,211	1,403	30%	3,692	1,420	28%
89	2,873	1,349	32%	3,745	1,429	28%
90	2,622	1,221	32%	3,779	1,450	28%
91	2,383	1,198	33%	3,640	1,489	29%
92	1,985	1,042	34%	3,428	1,524	31%
93	1,780	945	35%	3,198	1,404	31%
94	1,448	736	34%	2,975	1,333	31%
95	1,134	640	36%	2,635	1,128	30%
96	890	511	36%	2,260	991	30%
97	674	378	36%	2,016	771	28%
98	472	271	36%	1545	618	29%
99	327	181	36%	1158	510	31%
100	171	91	35%	858	284	25%
101	143	68	32%	530	189	26%
102	81	30	27%	406	127	24%
103	51	21	29%	281	89	24%
104	22	24	52%	169	73	30%
105+	24	28	54%	218	114	34%
Total	83,739	30,072	26%	89,249	30,310	25%

Table 67 OAS Beneficiary Exposures by Place of Birth (2019)

	Males			Females		
Age	Born in Canada	Born Outside Canada	Proportion Born Outside Canada	Born in Canada	Born Outside Canada	Proportion Born Outside Canada
65	162,644	29,542	15%	168,604	36,462	18%
66	158,488	33,572	17%	165,971	40,911	20%
67	147,751	36,209	20%	157,124	42,221	21%
68	142,601	36,866	21%	152,066	43,033	22%
69	138,040	38,665	22%	147,177	44,437	23%
70	129,316	45,514	26%	139,451	50,096	26%
71	124,403	48,779	28%	135,240	52,200	28%
72	122,137	48,788	29%	132,830	52,631	28%
73	102,408	41,952	29%	112,260	45,576	29%
74	92,181	38,537	29%	101,647	41,916	29%
75	87,757	37,288	30%	98,385	40,522	29%
76	83,210	33,983	29%	94,148	37,400	28%
77	74,067	31,415	30%	85,585	34,906	29%
78	67,079	29,493	31%	79,540	33,755	30%
79	59,244	28,608	33%	71,481	33,599	32%
80	54,642	26,891	33%	67,368	31,583	32%
81	49,282	25,199	34%	62,609	30,135	32%
82	44,230	23,310	35%	57,634	28,261	33%
83	40,971	21,697	35%	55,430	26,312	32%
84	36,527	19,660	35%	51,590	24,460	32%
85	32,681	17,865	35%	47,803	22,339	32%
86	29,973	15,969	35%	45,621	20,512	31%
87	26,657	14,155	35%	43,074	18,481	30%
88	23,130	12,457	35%	39,215	17,201	30%
89	18,980	10,764	36%	34,610	15,291	31%
90	15,104	8,665	36%	29,677	13,445	31%
91	12,346	7,162	37%	25,888	12,046	32%
92	9,464	5,653	37%	21,533	10,590	33%
93	7,240	4,391	38%	17,957	8,979	33%
94	5,462	3,257	37%	14,850	7,302	33%
95	3,880	2,404	38%	11,744	5,808	33%
96	2,659	1,728	39%	9,213	4,356	32%
97	1,908	1,176	38%	7,198	3,134	30%
98	1,174	806	41%	5,000	2,184	30%
99	763	482	39%	3,501	1,517	30%
100	412	234	36%	2,192	840	28%
101	256	156	38%	1,435	520	27%
102	130	86	40%	927	325	26%
103	71	68	49%	555	234	30%
104	38	51	57%	347	152	30%
105+	36	71	67%	367	236	39%
Total	2,109,343	783,567	27%	2,498,842	935,907	27%

Table 68 OAS Beneficiary Graduated Mortality Rates and Ratios by Place of Birth (2019)

	Males					Females				
Age	Overall OAS (annual deaths per thousand)	Born in Canada (annual deaths per thousand)	Ratio Born in Canada to Overall	Born Outside Canada (annual deaths per thousand)	Ratio Born Outside Canada to Overall	Overall OAS (annual deaths per thousand)	Born in Canada (annual deaths per thousand)	Ratio Born in Canada to Overall	Born Outside Canada (annual deaths per thousand)	Ratio Born Outside Canada to Overall
65	12.0	12.7	1.06	7.8	0.65	7.2	7.8	1.07	4.8	0.66
66	13.0	13.9	1.07	8.8	0.68	8.0	8.7	1.08	5.2	0.65
67	14.1	15.1	1.07	9.9	0.70	8.8	9.6	1.09	5.8	0.65
68	15.4	16.5	1.08	11.1	0.72	9.7	10.7	1.10	6.4	0.66
69	16.7	18.0	1.08	12.2	0.73	10.7	11.8	1.11	7.1	0.67
70	18.1	19.7	1.09	13.5	0.74	11.7	13.0	1.11	8.0	0.68
71	19.7	21.6	1.09	14.8	0.75	12.9	14.3	1.11	9.0	0.70
72	21.5	23.6	1.10	16.3	0.76	14.2	15.7	1.11	10.1	0.71
73	23.5	25.8	1.10	17.9	0.76	15.6	17.3	1.11	11.4	0.73
74	25.8	28.3	1.10	19.7	0.76	17.2	19.0	1.10	12.7	0.74
75	28.4	31.1	1.10	21.7	0.77	19.0	21.0	1.10	14.2	0.75
76	31.3	34.3	1.10	24.2	0.77	21.2	23.4	1.10	15.9	0.75
77	34.7	37.9	1.09	27.1	0.78	23.6	26.1	1.11	17.7	0.75
78	38.4	42.0	1.09	30.6	0.80	26.3	29.2	1.11	19.8	0.75
79	42.7	46.5	1.09	34.5	0.81	29.4	32.6	1.11	22.4	0.76
80	47.5	51.6	1.09	39.1	0.82	33.0	36.5	1.11	25.4	0.77
81	52.9	57.3	1.08	44.2	0.83	37.0	40.7	1.10	29.0	0.78
82	59.1	63.9	1.08	49.9	0.84	41.6	45.5	1.09	33.2	0.80
83	66.2	71.4	1.08	56.4	0.85	46.8	50.9	1.09	38.2	0.82
84	74.3	80.0	1.08	63.8	0.86	52.9	57.0	1.08	44.0	0.83
85	83.6	89.7	1.07	72.2	0.86	59.8	63.9	1.07	50.7	0.85
86	94.1	100.7	1.07	81.8	0.87	67.7	71.9	1.06	58.5	0.86
87	106.0	113.1	1.07	92.8	0.88	76.9	81.1	1.06	67.5	0.88
88	119.2	126.7	1.06	105.3	0.88	87.3	91.6	1.05	77.7	0.89
89	133.8	141.5	1.06	119.4	0.89	99.0	103.5	1.05	89.2	0.90
90	149.7	157.7	1.05	135.0	0.90	112.0	116.7	1.04	102.0	0.91
91	166.8	175.0	1.05	152.0	0.91	126.4	131.2	1.04	116.0	0.92
92	185.1	193.5	1.05	170.2	0.92	141.9	146.9	1.04	131.2	0.92
93	204.3	213.1	1.04	189.2	0.93	158.7	163.8	1.03	147.5	0.93
94	224.4	233.7	1.04	209.4	0.93	176.5	181.8	1.03	164.8	0.93
95	245.0	255.4	1.04	230.7	0.94	195.4	200.8	1.03	183.1	0.94
96	266.2	278.1	1.04	252.9	0.95	215.1	220.6	1.03	202.3	0.94
97	287.6	301.3	1.05	275.9	0.96	235.6	241.3	1.02	222.2	0.94
98	309.7	324.8	1.05	299.6	0.97	256.6	262.6	1.02	243.2	0.95
99	332.5	348.5	1.05	323.7	0.97	278.0	284.5	1.02	265.3	0.95
100	355.8	372.4	1.05	348.2	0.98	299.7	306.9	1.02	288.1	0.96
101	379.4	396.3	1.04	372.9	0.98	321.5	329.8	1.03	311.6	0.97
102	403.2	420.1	1.04	397.7	0.99	344.0	353.0	1.03	335.6	0.98
103	427.1	443.7	1.04	422.4	0.99	366.9	376.4	1.03	359.8	0.98
104	450.9	467.0	1.04	447.0	0.99	390.1	399.8	1.03	384.2	0.99
105	474.4	489.8	1.03	471.2	0.99	413.3	423.1	1.02	408.6	0.99
110	583.3	593.1	1.02	582.4	1.00	524.8	531.9	1.01	523.5	1.00
115	664.6	668.0	1.01	664.5	1.00	611.3	613.9	1.00	611.2	1.00
120	700.0	700.0	1.00	700.0	1.00	650.0	650.0	1.00	650.0	1.00

Table 69 Life Table of OAS Beneficiaries Born In Canada (2019)

	Males				Females			
Age	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$
65	100,000	12.7	1,273	18.83	100,000	7.8	777	21.63
66	98,727	13.9	1,368	18.07	99,223	8.7	861	20.79
67	97,359	15.1	1,472	17.32	98,362	9.6	948	19.97
68	95,887	16.5	1,583	16.58	97,414	10.7	1,040	19.16
69	94,304	18.0	1,702	15.85	96,374	11.8	1,137	18.36
70	92,602	19.7	1,826	15.13	95,237	13.0	1,238	17.57
71	90,776	21.6	1,956	14.42	93,999	14.3	1,344	16.80
72	88,820	23.6	2,094	13.73	92,655	15.7	1,456	16.04
73	86,726	25.8	2,239	13.05	91,199	17.3	1,574	15.28
74	84,488	28.3	2,393	12.38	89,624	19.0	1,704	14.54
75	82,095	31.1	2,557	11.73	87,920	21.0	1,849	13.82
76	79,538	34.3	2,731	11.09	86,072	23.4	2,012	13.10
77	76,807	37.9	2,914	10.46	84,060	26.1	2,192	12.40
78	73,894	42.0	3,101	9.86	81,867	29.2	2,388	11.72
79	70,793	46.5	3,291	9.27	79,480	32.6	2,592	11.06
80	67,501	51.6	3,481	8.69	76,887	36.5	2,803	10.42
81	64,020	57.3	3,671	8.14	74,084	40.7	3,018	9.79
82	60,349	63.9	3,857	7.60	71,066	45.5	3,234	9.18
83	56,492	71.4	4,034	7.09	67,832	50.9	3,451	8.60
84	52,458	80.0	4,196	6.60	64,381	57.0	3,667	8.03
85	48,262	89.7	4,331	6.13	60,714	63.9	3,881	7.49
86	43,931	100.7	4,426	5.68	56,833	71.9	4,087	6.97
87	39,505	113.1	4,466	5.26	52,745	81.1	4,278	6.47
88	35,039	126.7	4,438	4.87	48,467	91.6	4,440	5.99
89	30,601	141.5	4,331	4.50	44,027	103.5	4,555	5.55
90	26,270	157.7	4,142	4.16	39,472	116.7	4,605	5.13
91	22,128	175.0	3,872	3.85	34,867	131.2	4,574	4.74
92	18,255	193.5	3,532	3.56	30,293	146.9	4,451	4.38
93	14,724	213.1	3,137	3.29	25,842	163.8	4,234	4.05
94	11,586	233.7	2,708	3.04	21,609	181.8	3,929	3.74
95	8,878	255.4	2,268	2.82	17,680	200.8	3,550	3.47
96	6,611	278.1	1,838	2.62	14,130	220.6	3,118	3.21
97	4,772	301.3	1,438	2.43	11,013	241.3	2,657	2.98
98	3,335	324.8	1,083	2.26	8,356	262.6	2,194	2.77
99	2,252	348.5	785	2.11	6,162	284.5	1,753	2.57
100	1,467	372.4	546	1.98	4,409	306.9	1,353	2.40
101	921	396.3	365	1.85	3,056	329.8	1,008	2.24
102	556	420.1	233	1.74	2,048	353.0	723	2.09
103	322	443.7	143	1.64	1,325	376.4	499	1.96
104	179	467.0	84	1.55	826	399.8	330	1.84
105	96	489.8	47	1.46	496	423.1	210	1.73
110	2	593.1	1	1.16	21	531.9	11	1.33
115	0	668.0	0	0.99	0	613.9	0	1.11
120	0	700.0	0	0.80	0	650.0	0	0.85

Table 70 Life Table of OAS Beneficiaries Born Outside Canada (2019)

	Males				Females			
Age	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$	l_x	$1{,}000q_x$	d_x	$\mathring{e}_x$
65	100,000	7.8	776	20.99	100,000	4.8	476	23.80
66	99,224	8.8	878	20.15	99,524	5.2	520	22.91
67	98,346	9.9	978	19.32	99,004	5.8	571	22.03
68	97,368	11.1	1,078	18.51	98,433	6.4	629	21.15
69	96,290	12.2	1,179	17.72	97,804	7.1	697	20.29
70	95,111	13.5	1,283	16.93	97,107	8.0	776	19.43
71	93,828	14.8	1,390	16.15	96,331	9.0	866	18.58
72	92,438	16.3	1,503	15.39	95,465	10.1	967	17.74
73	90,935	17.9	1,623	14.63	94,499	11.4	1,075	16.92
74	89,312	19.7	1,755	13.89	93,423	12.7	1,191	16.11
75	87,556	21.7	1,903	13.16	92,233	14.2	1,313	15.31
76	85,653	24.2	2,073	12.44	90,920	15.9	1,442	14.53
77	83,580	27.1	2,268	11.74	89,478	17.7	1,584	13.75
78	81,312	30.6	2,486	11.05	87,894	19.8	1,744	12.99
79	78,827	34.5	2,723	10.38	86,150	22.4	1,927	12.24
80	76,103	39.1	2,974	9.74	84,223	25.4	2,136	11.51
81	73,129	44.2	3,231	9.11	82,087	29.0	2,377	10.80
82	69,898	49.9	3,490	8.51	79,710	33.2	2,648	10.11
83	66,408	56.4	3,746	7.93	77,062	38.2	2,944	9.44
84	62,663	63.8	3,995	7.38	74,118	44.0	3,262	8.79
85	58,668	72.2	4,234	6.84	70,856	50.7	3,595	8.17
86	54,434	81.8	4,453	6.34	67,261	58.5	3,935	7.58
87	49,981	92.8	4,639	5.86	63,325	67.5	4,273	7.02
88	45,342	105.3	4,776	5.41	59,053	77.7	4,589	6.49
89	40,566	119.4	4,843	4.98	54,464	89.2	4,860	6.00
90	35,723	135.0	4,822	4.59	49,604	102.0	5,060	5.54
91	30,900	152.0	4,696	4.23	44,544	116.0	5,168	5.11
92	26,204	170.2	4,459	3.90	39,375	131.2	5,166	4.72
93	21,745	189.2	4,114	3.60	34,209	147.5	5,045	4.35
94	17,631	209.4	3,693	3.32	29,164	164.8	4,807	4.02
95	13,938	230.7	3,216	3.07	24,357	183.1	4,461	3.71
96	10,722	252.9	2,712	2.84	19,896	202.3	4,025	3.43
97	8,010	275.9	2,210	2.63	15,871	222.2	3,526	3.18
98	5,800	299.6	1,737	2.44	12,345	243.2	3,003	2.94
99	4,062	323.7	1,315	2.26	9,342	265.3	2,478	2.73
100	2,747	348.2	957	2.11	6,864	288.1	1,978	2.53
101	1,791	372.9	668	1.97	4,886	311.6	1,523	2.35
102	1,123	397.7	447	1.84	3,364	335.6	1,129	2.19
103	676	422.4	286	1.73	2,235	359.8	804	2.04
104	391	447.0	175	1.62	1,431	384.2	550	1.91
105	216	471.2	102	1.53	881	408.6	360	1.79
110	6	582.4	3	1.18	42	523.5	22	1.35
115	0	664.5	0	0.99	1	611.2	0	1.12
120	0	700.0	0	0.80	0	650.0	0	0.85

Table 71 Life Expectancies at Age 65 by Type of Benefit, Marital Status and Place of Birth

Type of Benefit	2007			2013			2019		
	Males	Females	Female – Male Differential	Males	Females	Female – Male Differential	Males	Females	Female – Male Differential
Benchmark (Statistics Canada CLT of year)	18.0	21.1	3.2	19.1	21.9	2.8	19.6	22.4	2.7
OAS program	17.8	21.0	3.2	18.9	21.8	2.9	19.4	22.2	2.8
Differential Benchmark and OAS	0.2	0.1		0.2	0.2		0.2	0.2	
OAS with GIS	16.2	19.9	3.7	17.1	20.4	3.4	17.4	20.7	3.3
OAS without GIS	18.6	21.8	3.2	19.7	22.6	2.9	20.3	23.2	2.8
Differential OAS without and OAS with GIS	2.5	1.9		2.6	2.2		2.9	2.5	
Single	15.2	20.1	4.9	16.4	20.8	4.4	16.8	21.1	4.3
Married	19.0	22.2	3.2	20.0	23.0	3.0	20.7	23.5	2.8
Differential Married and Single	3.8	2.1		3.6	2.2		3.9	2.4	
OAS with GIS Single	14.0	19.4	5.4	15.1	19.9	4.8	15.3	20.0	4.7
OAS without GIS Single	16.3	20.9	4.6	17.5	21.8	4.2	18.1	22.3	4.1
Differential without GIS and with GIS Single	2.3	1.5		2.5	1.9		2.8	2.3	
OAS with GIS Married	17.7	20.8	3.0	18.7	21.5	2.8	19.5	22.2	2.7
OAS without GIS Married	19.5	22.8	3.3	20.5	23.6	3.1	21.1	24.0	2.9
Differential without GIS and with GIS Married	1.8	2.1		1.8	2.1		1.7	1.9	
Born in Canada	17.3	20.6	3.2	18.4	21.3	2.9	18.8	21.6	2.8
Born outside of Canada (immigrants)	19.0	22.1	3.1	20.3	23.1	2.9	21.0	23.8	2.8
Differential immigrants and born in Canada	1.7	1.5		1.9	1.9		2.2	2.2	

Appendix B — References

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