Forecast on deaths and life expectancy in 2020

SCB

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The progress of average life expectancy

Life expectancy has increased steadily in the period 1900–2019. There have been some years and shorter periods of stagnation or reduced life expectancy. It is safe to assume that in 2020, life expectancy will decline. There are major regional differences, and the largest decline in life expectancy is expected in Stockholm County.

Introduction

In 2020, the number of deaths from COVID-19 has led mortality rates to deviate more than usual on a year-to-year basis. During the year, there has been an increasing interest in deaths per day, per week, and per month. There has also been a question on how life expectancy in 2020 may be affected, based on mortality rate development during part of the year. The purpose of this report is to present estimates of remaining life expectancy in Sweden in 2020, based on the number of deaths in the period from January to August. Another question addressed in the report is whether there are regional differences.

Statistics Sweden does not normally produce life tables based on observations during only part of the year. There has seldom been any interest in these tables, as mortality rates normally progress as a fairly stable process with lower mortality rates over time. However, 2020 is an exception. The estimate presented in this report can be seen as a forecast for 2020. For this reason, several different assumptions are also made on how the variation may look like for the final months of the year. The estimates are compared with assumptions on deaths and life expectancy in the latest population projection, which was established before any increase in mortality due to COVID-19 was discernible in Sweden.

The report first describes the long-term historical development of life expectancy, in other words, what is considered normal in a long-term perspective. Then, various calculations for 2020 are presented, including regional differences and calculations with higher and lower mortality rates at the end of the year than are most commonly expected at the end of a year. The contribution of various age groups to changes to life expectancy is also highlighted in this report.

Exceptionally large increase in life expectancy in 2019

Average life expectancy in Sweden is increasing steadily. In 2019, life expectancy in Sweden was 84.7 years for women and 81.3 years for men.

The aim is to estimate average life expectancy in 2020 based on observed data during part of the year.

This can be compared with 53.6 years for women and 50.8 years for men in 1900, an increase of just over 30 years for both women and men. This means an average rate of increase of one extra year of life every four years.

In the 2000s, the rate of increase in life expectancy slowed distinctly, and has been on average 0.1–0.2 years, slightly more for men than for women (Statistics Sweden, 2018a). However, it is unusual for life expectancy to drop from one year to the next.

In 2019, life expectancy increased by around half a year for both sexes, from 84.3 years to 84.7 years for women and from 80.8 years to 81.3 years for men. Increases this large are rare. The increase in life expectancy in 2019 compared with 2018 was largely due to lower mortality rates among persons older than 64 years; this increase was 0.4 years for women and just over 0.3 years for men (see Figure 1). Mortality rates clearly dropped more for men than for women in the ages 20 years to 64 years.

Figure 1
Different age groups' contributions to life expectancy changes for women and men between 2018 and 2019
Contribution in years
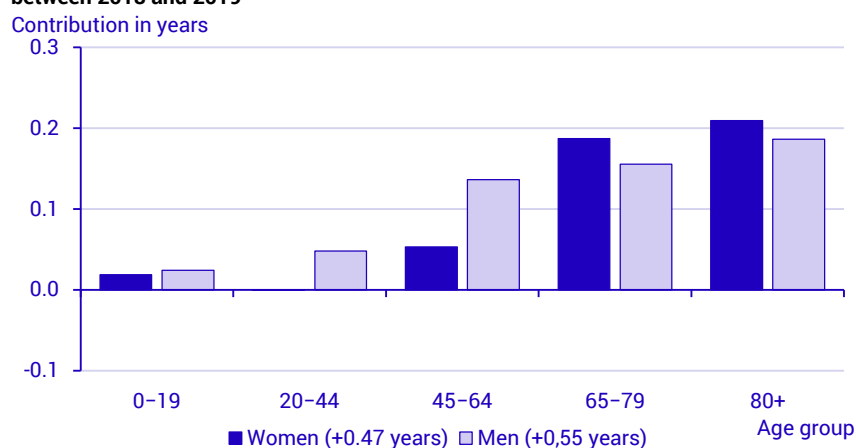
The total increase in life expectancy for women and for men is shown in parentheses. This calculation is based on age at the end of the year. If mortality in an age group is lower in 2019 than in 2018, this contributes to higher life expectancy in 2019, while if the mortality is higher, then it contributes to lower life expectancy.

Forecast for 2020

In 2020, Statistics Sweden published mortality rates on a weekly basis. Compared with the average in the five previous years, 2015–2019, there were more deaths in Weeks 13 to 26 in 2020 (Statistics Sweden, 2020a). These weeks comprise one-fourth of the year 2020. Such a long period with increased mortality will mostly likely lead to a decline in life expectancy in 2020 compared with 2019. From 1 January until 31 August 2020, there were nearly 6 500 more deaths than in the same period in 2019. This is 4 800 more deaths than expected based on the latest population projection for 2020[1].

Most of the excess deaths compared with the previous year occurred in older age groups, although it appears that the number of deaths may be higher in 2020 than in 2019 in all age groups, at least based on data up to 31 August (see Figure 2).

Figure 2
Number of deaths from 1 January to 31 August 2020 compared with the same period in 2019, total for both sexes
Number of deaths
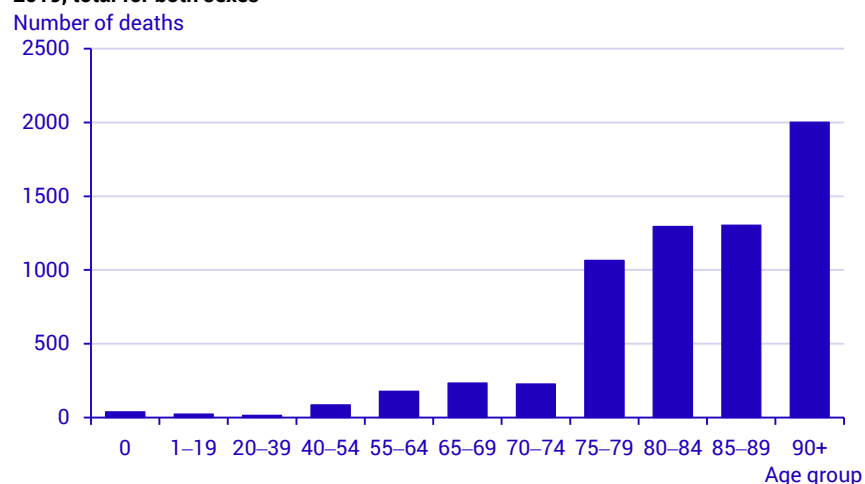
The figure shows the difference between the number of deaths in January to August in 2020 and the number of deaths in January to August in 2019. No account has been taken of the fact that there were 29 days in February in 2020.

During August 2020, as well as in January and February, mortality rates stabilised on a level with the same low rate as in 2019.

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[1]The assumption on the number of deaths in the future population of Sweden 2020–2070 was around 90 400 in 2020. Based on the average proportion of deaths in the period January to August 2015–2019, 67.15 percent, deaths up to 31 August 2020 are estimated to around 60 700. There were just over 65 000 deaths noted during this period.

In the beginning of the coronavirus pandemic, some demographers created a simulation in which life expectancy in Europe, including Sweden, could decline by just over one year of life if the proportion of people infected with COVID-19 was around 10 percent of the population (Marois et al., 2020). In particular, they identified elevated mortality rates among vulnerable groups in the population as the primary contribution to an anticipated decline in life expectancy.

The real proportion of persons infected with COVID-19 in Sweden is not known, which means the mortality rate among infected persons is unknown for women and men and in different ages. We know that the proportion of people infected with COVID-19 in Sweden has been considerably higher than in our neighbouring countries, Norway and Finland. The highest excess mortality among people aged 70 years and older has been among people who were already ill and among the most vulnerable persons in elderly housing, according to analyses carried out by the National Board of Health and Welfare (2020a). There have also been reports of major regional differences within Sweden, and another demographic analysis has shown that the Stockholm region appears to have stood out the most with high mortality rates in the beginning of the pandemic in 2020 (Drefahl et al., 2020).

COVID-19 will lead lower life expectancy in 2020

The development of mortality rates up to August indicates declining life expectancy for both women and men in 2020, from 84.7 years to 84.4 years for women and from 81.3 years to 80.8 years for men. For men, roughly speaking this means that the large increase in life expectancy in 2019 will be erased and will return to the 2018 level. For women, the decline is somewhat smaller.

The oldest age group, people aged 80 years or older, is the age group that may contribute the most to the decline in life expectancy in 2020. For men, it appears that the mortality rate in the age group 0–19 years will be higher in 2020 than in 2019. In the age group 20–44 years, there have been few deaths from the effects of COVID-19 and this age group has little impact on life expectancy. The mortality rates in these ages have remained fairly constant for several years. This is because mortality is dominated by causes of death that do not decrease, such as suicide. Increased unemployment in 2020 could lead to more suicides, in particular among young adults. A brief analysis from the Public Health Agency of Sweden (2020a) shows that a transition to unemployment from gainful employment has increased the risk of death by suicide. This does not appear to have occurred among young adults up to August 2020, at least not to the extent that it would impact total mortality rates. An analysis published by the National Board of Health and Welfare shows that suicide attempts reported in the first six months of 2020 also have not increased compared with the first six months of 2015 to 2019 (National Board of Health and Welfare, 2020b).

The 2019 rise in life expectancy for men will be erased.

Figure 3

Forecast of various age groups' contribution to life expectancy changes among women and men between 2019 and 2020

Contribution in years
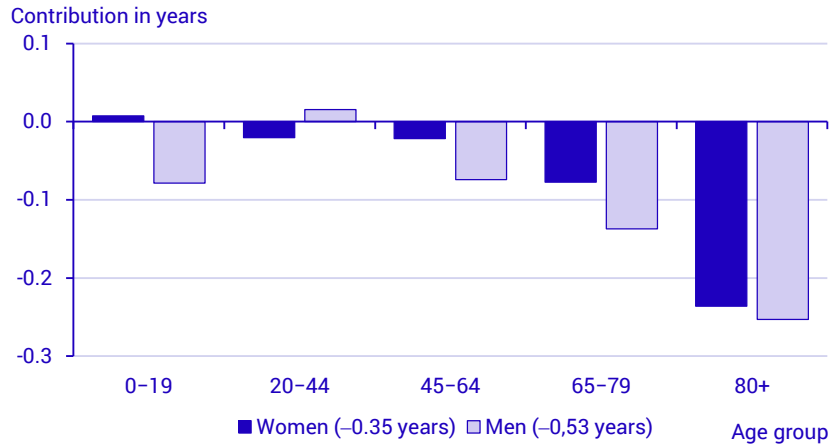
The total decline in life expectancy among women and men is shown in parentheses. The calculation is based on age at the end of the year. If mortality in an age group is expected to be lower in 2020 than in 2019, then this leads to higher life expectancy in 2020, while if mortality is higher, then it contributes to lower life expectancy.

Alternative assumptions for the remainder of 2020

Using normal variation in mortality rates in the last four months of the year as a starting point can give us a picture of possible variation in mortality rates in the remainder of 2020. In the period 2010–2019, mortality rates decreased among women and men taken together. If this trend in mortality rates persists, they can be expected to be slightly lower in 2020 than in 2019. However, Figure 4 also shows that there were a few years in which mortality rates increased somewhat compared with the preceding year, and there was a break in the downward trend between 2013 and 2016.

Figure 4

Mortality rates for women and men between September and December 2010-2019

Deaths per 100 000
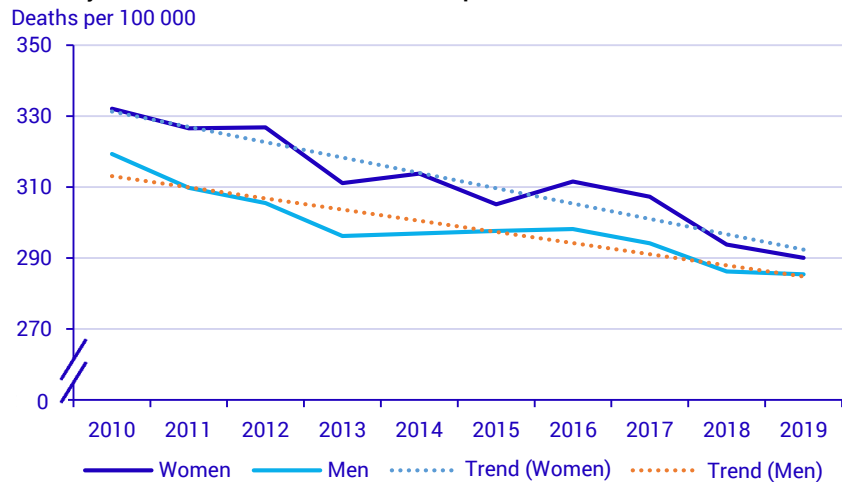
The mortality rates show all ages taken together.

Depending on the assumptions made for the final months of 2020, life expectancy can be higher or lower than estimated using the number of deaths up to and including August, based on the same mortality rates as in 2019 and based on the same mortality rates as in October to December 2019. Alternative estimates of life expectancy use an assumption of higher mortality rates to arrive at an estimate of the possible effects of a second COVID-19 wave, and an assumption of mortality rates lower than in 2019 (for more information, see "The statistics in brief").

Average life expectancy may decline further
The assumption of lower mortality rates affords fairly narrow marginal differences for 2020 compared with the calculation based on an assumption of unchanged mortality rates from the previous year for the four last months of 2020, 84.5 years compared with just under 84.4 years for women and almost 81.0 years compared with 80.8 years for men (see Table 1).

The assumption of a second wave of COVID-19 in November and December 2020 leads to more deaths and a further slightly lower life expectancy than if mortality rates for the end of 2020 were on a level with 2019; 84.1 years instead of 84.4 years for women and 80.4 years compared with 80.8 years for men. For men, this would mean almost one year of life less in life expectancy in 2020 than a year ago.

Table 1
Number of remaining years at 0 years and at 65 years, by sex. Observations in 2018 and 2019, and different estimates for 2020

Observations in 2018 and 2019, and different estimates for 2020	At 0 years old		At 65 years old	
	Women	Men	Women	Men
2018	84.25	80.79	21.56	19.14
2019	84.72	81.33	21.98	19.52
2020, same mortality rates as in 2019 for the remainder of the year	84.37	80.81	21.65	19.09
2020, higher mortality rates for the remainder of 2020 than in 2019	84.12	80.44	21.45	18.82
2020, lower mortality rates for the remainder of 2020 than in 2019	84.51	80.96	21.76	19.20
Assumptions for 2020 in the population projection for 2020	84.79	81.44	21.97	19.62

All estimations of lower life expectancy in 2020 than in 2019 are statistically significant. The same mortality rates as in 2019 are defined as the same mortality rates in the four last months of 2020 as in 2019. Higher mortality rates assumes two months of a second wave of elevated mortality rates due to COVID-19. There is an assumption of half of the excess mortality in April, 24 percent more per 100 000 men and 18 percent more per 100 000 women in November and December.

All calculations anticipate a statistically significant decline in remaining life expectancy in 2020 for both women and men, both at 0 years and at 65 years (see Table 1). In the latest population projection, based on the trends in recent decades up to and including 2019, life expectancy in 2020 was expected to increase by slightly less than in a normal year, since the increase in 2019 was exceptionally large, by just under 0.1 year for women and just over 0.1 year for men (Statistics Sweden, 2020b).

Regional differences

There are differences in life expectancy between the counties in Sweden. These are normally reported by Statistics Sweden over five-year periods (Statistics Sweden, 2016). To assess how the coronavirus pandemic has affected life expectancy in various counties requires the use of annual data. It also then becomes important to take greater account of the uncertainty in the calculation of life expectancy arising from a smaller population and fewer deaths at county level compared with national level.

In 2019, life expectancy at birth (for both sexes taken together) was highest in Halland County, 84.2 years, followed by the counties of Uppsala, Stockholm, Jönköping, and Kronoberg, 83.5 years to 83.8 years. The lowest life expectancy was noted in Norrbotten County, 81.5 years, followed by the counties of Västernorrland, Jämtland, and Gävleborg, 81.9 years to 82.1 years. The difference between the highest and the lowest life expectancy is 2.7 years.

Average life expectancy declining most in Stockholm County

It appears that life expectancy in 2020 will decline most in Stockholm County, while it may increase in Västerbotten County.

Mortality rates at county level in the first eight months of 2020 indicate that life expectancy may decline in many counties, but not in all of them. It appears that in Västerbotten County, life expectancy may increase in 2020 compared with 2019. In the counties of Skåne, Halland, Norrbotten, Gävleborg, Örebro, Blekinge, Jämtland, and Gotland, the estimated change is not statistically significant.

Unless mortality rates in the last months of 2020 do not decrease dramatically, life expectancy will decline in the other counties. In Stockholm County, which has previously noted the highest mortality rates related to COVID-19 and with high overall excess mortality compared with previous years, life expectancy is expected to drop by 1.2 years, from 83.7 years to 82.5 years. The counties of Södermanland, Jönköping, and Uppsala are also expected to note larger declines in life expectancy than at the national level, between 0.6 years and 0.7 years.

Figure 5

Average life expectancy projected change at 0 years in 2020 compared with 2019, by county. Total for both sexes
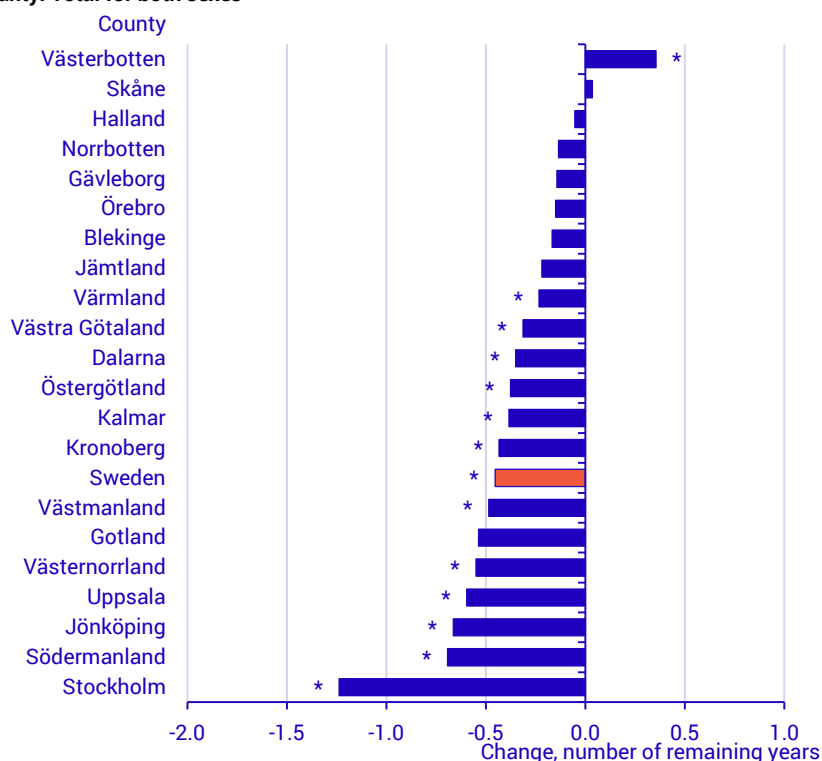
*The change between 2020 and 2019 is statistically significant with 95 percent accuracy. The counties are listed by the size of the expected change. Average life expectancy at county level in 2019 and a forecast for 2020 is available in the Annex on tables, Table T1.

Calculations on the change in life expectancy in 2020 compared with 2019 is somewhat more reliable for counties when calculated at 65 years than at 0 years[2]. Unless the mortality rates are not dramatically lower in the last months of 2020 compared with 2019, which is also the lowest level observed up to now in the period 2010–2019, remaining life expectancy at 65 years will decline in most counties (see Figure 6). Mortality rates are also expected to increase in Västerbotten County, while in four other counties, Gotland County (with the smallest population and the largest uncertainty in the estimation), Örebro County, Jämtland County, and Blekinge County, the change will not be statistically significant.

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[2]This is because most individual ages between 65 years and 99 years note more deaths at each age than at younger ages. Random deviations are more perceptible at younger ages that affect the measure of life expectancy more than at older ages.

Figure 6
Average life expectancy projected change at 65 years in 2020 compared with 2019, by county. Total for both sexes
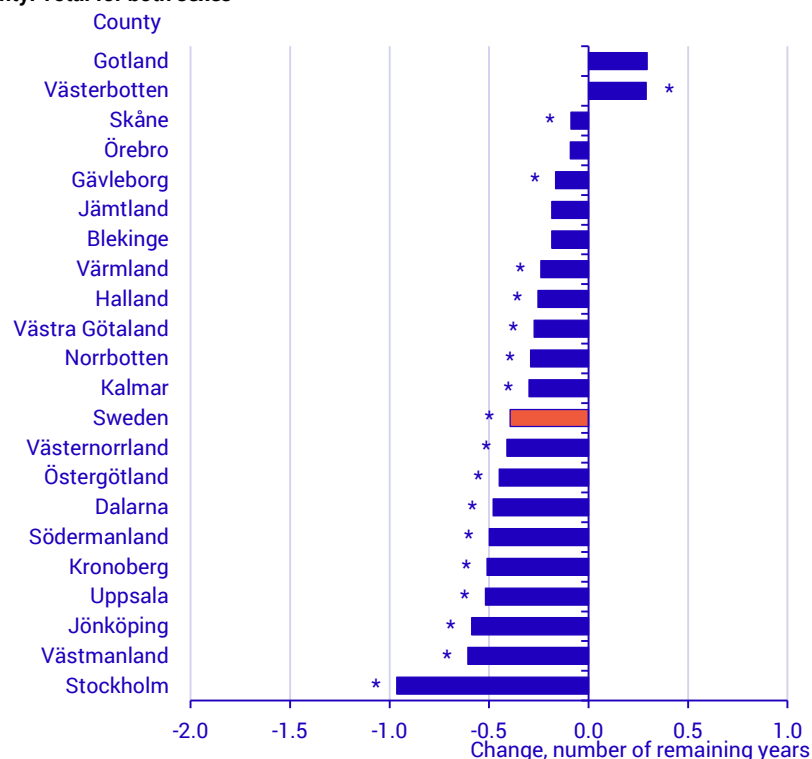

*The change between 2020 and 2019 is statistically significant with 95 percent accuracy. The counties are listed by the size of the expected change. Average life expectancy at county level in 2019 and a forecast for 2020 are available in the Annex on tables, Table T2.

In Stockholm County, remaining life expectancy at 65 years is expected to decline by one year, from 21.2 years to 20.2 years. The number of remaining years of life is expected to remain highest in Halland County in 2020 compared with 2019, 21.4 years and 21.7 years respectively. The lowest number of remaining years of life is expected to be noted in Västernorrland County, 19.5 years, which is the same county as in 2019, 19.9 years. The difference in the number of remaining years between Halland County and Västernorrland County may be slightly larger in 2020 than in 2019.

Changed mortality rates at different ages – large variation between counties

In Stockholm County, it appears that mortality rates will increase in 2020 in all age groups compared with 2019. All age groups will contribute to the decline in life expectancy in 2020 (see Figure 7). The largest contribution, minus 0.6 years, is the result of higher mortality rates in 2020 compared to 2019 in those aged 80 and older.

There are major regional differences in the changes in mortality rates in 2020. In Västra Götaland County, the estimated change in life expectancy is somewhat smaller than at national level, but the

difference compared with Stockholm County is evident in all age groups. For example, there are no discernible elevated mortality rates between 0 years and 44 years in Västra Götaland County. In Västerbotten County, which is the only county that may have a higher life expectancy in 2020, there is an indication that mortality rates in 2020 may be lower than in 2019 in the ages 20–44 years, 65–79 years, and 80 years and older.

Figure 7
Forecast of various age groups' contribution to life expectancy changes in 2020 compared with 2019 in three selected counties

Contribution in years

Age group

■ Stockholm (–1.2 years) ▢ Västra Götaland (–0.3 years) ■ Västerbotten (+0.4 years)
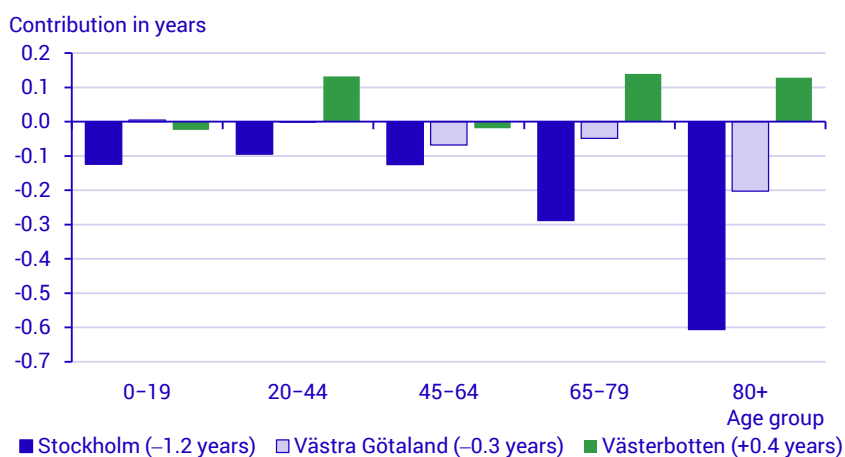
The total change in life expectancy in the county is shown in parentheses. The calculation is based on age at the end of the year. If mortality in an age group is expected to be lower in 2020 than in 2019, then this leads to higher life expectancy in 2020, while if mortality is higher, then it contributes to lower life expectancy.

Closing comments

Declining life expectancy is unusual in Sweden

In the long term, life expectancy in Sweden is increasing steadily, although the rate of increase has slowed. Sweden is not so different from other comparable countries. However, several countries have noted somewhat larger increases in life expectancy than Sweden in the 2000s, including France, Switzerland and Norway (Statistics Sweden, 2018a).

Despite the slowing rate of increase of life expectancy, a decrease for both women and men between two years is unusual. The last time this happened was in 2015; that decrease, less than 0.1 years, was marginal. Before that, life expectancy decreased for both women and men in 1988, 1985, 1968, 1960, 1957, 1947, and in 1943–1944. Two of these years coincide with major influenza pandemics, the 1957 Asian flu pandemic and the 1968 flu pandemic, when life expectancy declined by around 0.2 years.

Largest decline in over 70 years

The calculation of life expectancy that can be seen as the main alternative, based on the observed numbers of deaths from January to August and assuming the same mortality rates from September to December as in 2019, life expectancy is expected to be just under 0.4 years less for women and just over 0.5 years less for men. This may be the largest decrease since 1944, when life expectancy for women fell by 0.8 years and for men by 1.1 years. The second largest decline since the 1940s was 0.3 years in 1960. An alternative based on lower mortality rates in the last months of 2020 than in 2019 would lead to a somewhat smaller decline. However, the increased spread of COVID-19 now observed in Sweden may well lead to more extra deaths in the final two months of 2020, which may lead to an even lower life expectancy in 2020.

A majority of the counties may note lower life expectancy in 2020 than in 2019. Västerbotten County may deviate, with a higher life expectancy in 2020 than in 2019. It appears that Stockholm County may note the largest drop in life expectancy, 1.2 years at 0 years old and 1 year at 65 years old if the mortality rate for the remainder of 2020 will be on a level with 2019. No alternative assumptions about mortality rates of different sizes for the remainder of 2020 were used for the regional estimates.

It should be noted that 2019, which we are comparing with, was an unusual year in terms of life expectancy. Average life expectancy between 2018 and 2019 noted a historically large increase, the largest in

just over two decades. Compared with 2018 levels, life expectancy in 2020 may be somewhat higher for women and probably somewhat lower for men.

Not all extra deaths in 2020 are due to COVID-19

The number of deaths in Sweden that can be related to COVID-19 in various ways, either as a cause of death or as a death involving COVID-19 in which there is another main cause of death, is lower than the total number of extra deaths observed in 2020. There are around 10 percent more deaths in 2020 up to August than the reports on deaths from or involving COVID-19. A Swedish study on mortality published in spring 2020 states that COVID-19 may be underreported (Modig et al., 2020). In Sweden, the difference between the total number of extra deaths and the number of deaths involving COVID-19 is relatively small. In the United States, the difference between the official number of deaths from or involving COVID-19 and the total number of extra deaths compared with recent years is estimated to around 83 000 (Rossen et al., 2020). This corresponds to 38 percent more than the official deaths from COVID-19. The difference does not have to be solely due to underreporting, but is probably also caused by indirect effects that follow in the wake of the coronavirus pandemic (Settersten et al., 2020).

The indirect effects are deaths that could have been avoided if health care had not been under such heavy pressure that some treatments could not be carried out, there were fewer preventive measures and diseases were discovered later. Another effect could be that people avoided getting medical attention during the pandemic due to fear of contagion. In a questionnaire survey, 20 percent stated that they had avoided seeking care despite needing to during the coronavirus pandemic (Public Health Agency of Sweden, 2020b). A report published by the Swedish Association of Local Authorities and Regions shows that there was a distinct drop in the number of planned operations and treatments, inpatient occasions and emergency visits during parts of 2020 compared with 2019 (SKR, 2020). On the other hand, emergency care linked to stroke and heart attacks does not appear to have been affected and operations approached normal levels during the summer, according to the SKR analysis.

Other indirect effects might be caused by the economic consequences of shutdowns, leading to, for example, increased unemployment. Indirect effects can be both critical and long term (Settersten et al., 2020).

Sweden resembles the United States with regard to the number of deaths in relation to the population size in the wake of COVID-19. A second wave with a large number of deaths was observed in the United States in July and August (Rossen et al., 2020). This means that an assumption of a second wave with a higher number of deaths is not unlikely in Sweden. This also appears to have occurred in some European countries in the autumn, including the United Kingdom,

Belgium and Spain[3], although thus far with smaller increases than in the United States. There is nothing in the international developments to indicate that mortality rates will be much lower than in 2019 in the final months of 2020. COVID-19 is a disease that affects the entire society, with both short and long-term health implications. This means that mortality rates may differ from the long-term trend also in the years ahead.

[3] Source: Eurostat,
https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_r_mweek3&lang=en,

Proprietary processing of weekly statistics on the number of deaths in relation to the population in the beginning of 2020 for Belgium, Bulgaria, Czechia, Denmark, Finland, France, Germany, Spain, Sweden, and the United Kingdom [retrieved 2020-11-13].

The statistics in brief

The purpose of these statistics is to describe the development of mortality in Sweden. The statistics are included in the field of demographic analyses. Demographic analyses are mainly used for analysing and describing developments in fertility, mortality and migration, providing documentation for assumptions that form the basis for the yearly population projections (see Population projections, www.scb.se/BE0401) and analysing and describing partnering and separations.

Demographic analyses have a broad group of external users, among whom the main users are the Government, government agencies, municipalities and regions. These statistics are used primarily for their enquiries and planning. The reports are also used by the media, students and the general public to gain more knowledge about demographic development trends in society.

The data material used in this report was retrieved from the Total Population Register (RTB) for different years, population up to and including 30 June 2020 and deaths up to and including 31 August 2020. The statistics refer to persons registered in the population in Sweden.

Definitions and explanations

Mortality rate
Mortality rate refers to the number of deaths in relation to the size of the population for women and for men at different ages. In this report, these are primarily presented as the number of deaths per 100 000.

Population
The size of the population for the full years presented in this report, 2018 and 2019, refers to the average population during a calendar year. For 2020, the population in the middle of the year, on 30 June 2020, in the Total Population Register is used for the second quarter 2020.

Age
In this report, age refers to the age at the end of the year.

Remaining life expectancy
Average life expectancy at birth is a measure, or rather an index, which in a comprehensive way measures mortality for all ages during a calendar year or for a cohort. Remaining life expectancy can be calculated at any age. In this report, remaining life expectancy is presented at 0 years and at 65 years.

Deaths, risk of death and remaining life expectancy
Calculation of deaths, risks of death for different ages at the end of the year is described in *The future population of Sweden 2018–2070*, pp. 148–150 (Statistics Sweden, 2018b).

Estimation of the number of deaths for the last four months of 2020 is based on the number of deaths the previous year in the same period. The population on 30 June 2020 for women and for men in each individual age is used for the calculation of the number of deaths for the full year 2020. The number of deaths per sex and age in the first eight months of 2020 is compared with the number of deaths in the same period in 2019. The difference was in total 6 463 deaths more in 2020 than in 2019, of whom 2 762 were women and 3 701 were men. During the remainder of 2020, the number of deaths per sex and age is assumed to be the same as in 2019.

The estimation of remaining life expectancy is based on the number of deaths by age at the end of the year, converted to risk of death. The life expectancy calculation based on these numbers of deaths differs slightly from the estimation made in the official statistics on remaining life expectancy, although the similarity between the estimates is very high; the difference is estimated to at most 0.1 year in deviation.

Life tables for counties were calculated for 2019 and observed data on the number of deaths up to and including August 2020 was used for similar calculations in the counties as in the entire country for 2020. This was done for women and for men, as well as for both sexes taken together. In this report, statistics are only reported for both sexes taken together, as these figures are more reliable. For counties, the same mortality rates are used as for the country as a whole in ages over 99 years.

Method for calculating the contribution of various ages to changes in life expectancy between different years
The method for calculating various ages' contribution to changed life expectancy is described in an earlier report (Statistics Sweden, 2018a, pp. 163–164).

Statistical test of change in life expectancy in 2020 compared with 2019
Uncertainty in the estimation of life expectancy is greater at county level than at national level. This is why the estimated change in life expectancy was tested for significance at 0 years and at 65 years. The same test for estimating the change was used as for testing county deviation from national level. This is described in the most recent Statistics Sweden report on Life expectancy in Sweden (Statistics Sweden, 2016, pp. 96–98).

Alternative assumptions for the remainder of 2020

In alternative estimations of life expectancy, one assumption of lower mortality rates is used and one assumption of higher mortality rates at the end of 2020 compared with 2019. Alternative assumptions are only made for the whole country in total, not at county level. However, assumptions are made by sex, since mortality rates in 2020 compared with 2019 increased more among men than among women.

For the higher mortality rate, the assumption is that Sweden will have a second wave of infected persons and deaths from or related to COVID-19, much the same way that has already been observed in the United States (Rossen et al., 2020). In the United States, the second wave accounted for roughly half of the increase in mortality rates compared with the first wave in the spring. The higher mortality rate in November and December 2020 is also expected to be half as large for Sweden as the increase in the number of deaths per 100 000 observed in April 2020. The increase in mortality rates in April was 48 percent among men and 36 percent among women, and the assumption for the final months of 2020 is an increase of 24 percent in the mortality rates among men and 28 percent higher among women. At the time of writing, no elevated mortality rate has been observed in the period from 1 September up to and including 28 October 2020 (Statistics Sweden, 2020a). Therefore, the elevated number of deaths is assumed for the last two months of the year. Any higher mortality rates at the end of the year can only affect the number of deaths in the full year by one-sixth. The mortality rates for the full year is increased by three percent for women and by four percent for men.

The assumption of a lower mortality rate corresponds to the largest decrease observed between two years for the last four months of the year in the period 2010-2019, 4.8 percent. This means that mortality rates for the full year is adjusted downwards by 1.6 percent, since only one-third of the year remains. There is little evidence to suggest a significant drop in mortality rates in the autumn compared with the previous year, at any rate not larger than what was observed earlier in the period 2010-2019. The year 2018 is interesting to compare with, as there were relatively high mortality rates in March that year. At the end of 2018, mortality rates decreased approximately in a way that can be seen in a downward expected trend (see Figure 4). At the end of October, there were no indications of a sharp drop in mortality rates in the final months of 2020. This means that the assumption of a 4.8 percent decrease in mortality rates for four months in practice corresponds to a drop twice as large, 9.6 percent, in the two last months of the year.

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Appendix of tables

Table T1
Remaining life expectancy at 0 years, at county and national level in 2019, forecast for 2020 and change between the years. Total for both sexes

County	2019	Forecast 2020	Change
Halland County	84.2	84.2	-0.1
Uppsala County	83.8	83.2	-0.6
Stockholm County	83.7	82.5	-1.2
Jönköping County	83.6	82.9	-0.7
Kronoberg County	83.5	83.1	-0.4
Kalmar County	83.3	82.9	-0.4
Östergötland County	83.1	82.7	-0.4
Gotland County	83.1	82.6	-0.5
Skåne County	83.0	83.1	0.0
Värmland County	82.8	82.6	-0.2
Blekinge County	82.8	82.7	-0.2
Dalarna County	82.8	82.4	-0.3
Västra Götaland County	82.8	82.4	-0.3
Örebro County	82.6	82.5	-0.1
Västerbotten County	82.6	83.0	0.4
Södermanland County	82.4	81.7	-0.7
Västmanland County	82.3	81.8	-0.5
Gävleborg County	82.1	82.0	-0.1
Jämtland County	82.1	81.9	-0.2
Västernorrland County	81.9	81.4	-0.6
Norrbotten County	81.5	81.4	-0.1
Entire country	**83.0**	**82.6**	**-0.5**

The counties are listed by observed remaining life expectancy in 2019. The change may look incorrect due to rounding off.

Table T2

Remaining life expectancy at 65 years, at county and national level in 2019, forecast for 2020 and change between the years. Total for both sexes

County	2019	Forecast 2020	Change
Halland County	21.7	21.4	-0.3
Kronoberg County	21.4	20.9	-0.5
Uppsala County	21.3	20.8	-0.5
Jönköping County	21.3	20.7	-0.6
Stockholm County	21.2	20.2	-1.0
Kalmar County	21.1	20.8	-0.3
Östergötland County	21.0	20.5	-0.4
Skåne County	20.8	20.7	-0.1
Gotland County	20.7	21.0	0.3
Västmanland County	20.7	20.1	-0.6
Värmland County	20.7	20.5	-0.2
Dalarna County	20.7	20.2	-0.5
Blekinge County	20.7	20.5	-0.2
Södermanland County	20.6	20.1	-0.5
Västra Götaland County	20.6	20.3	-0.3
Örebro County	20.5	20.4	-0.1
Västerbotten County	20.3	20.5	0.3
Jämtland County	20.2	20.0	-0.2
Gävleborg County	20.2	20.0	-0.2
Norrbotten County	20.0	19.7	-0.3
Västernorrland County	19.9	19.5	-0.4
Entire country	20.8	20.4	-0.4

The counties are listed by observed remaining life expectancy in 2019. The change may look incorrect due to rounding off.