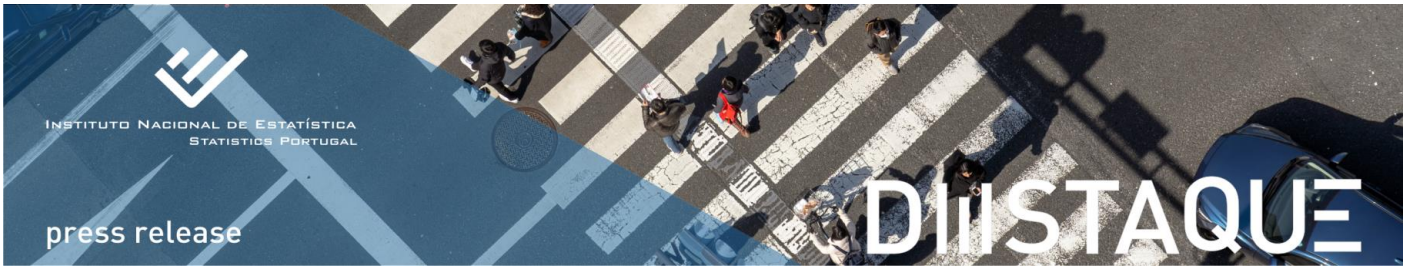

September 18th 2020
WEEKLY DEATHS – preliminary data
Weeks 1 to 35 of 2020

MORTALITY IN PORTUGAL IN THE CONTEXT OF THE COVID-19 PANDEMIC

Between March 2nd, when the first cases of COVID-19 were diagnosed in Portugal, and August 30th, there were 57,971 deaths in the national territory, an increase of 6,312 deaths in 2020 when compared to the average number of deaths during the same period over the past five years. 1,822 of these deaths were due to COVID-19.

The increase in deaths, registered from March 2020, peaked at week 15 (between April 6th and 12th), gradually decreasing until the end of the State of Emergency period (May 3rd). At the end of May, there was a new peak in mortality, reaching the values observed in previous years during weeks 24 and 25 (8th to 21st of June). Excess mortality compared to the average for the same period reached the maximum in week 29 (July 13th to 19th), with an additional number of deaths of around 800 deaths.

Of the total deaths recorded between March 2nd and August 30th, 28,400 were of men and 29,391 were of women, an increase of 2,597 and 3,715 deaths, respectively, compared to the average of deaths observed in the same period between 2015-2019.

More than 70% of deaths were of people aged 75 years or over. Compared to the average number of deaths observed in the same period from 2015-2019, another 5,518 people died aged 75 and over, of which 4,371 were aged 85 and over.

The largest increase in the number of deaths in relation to the 2015-2019 average was registered in the region Norte, with the exception of the last week of June and the first of July, when this increase was higher in the Área Metropolitana de Lisboa.

Although the highest proportion of deaths has always occurred in hospital, the proportion of deaths at private homes and other locations was, from March 2nd onwards, above the 2015-2019 average, reaching in week 12 (March 16th to 23rd) 46.1% of the total number of deaths in that week.

Despite the circumstances determined by the COVID-19 pandemic, Statistics Portugal asks for the best collaboration from companies, families and public entities in responding to Statistics Portugal's requests. The quality of official statistics, particularly its ability to identify the impacts of the COVID-19 pandemic, depends crucially on this collaboration that Statistics Portugal thanks in advance.

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In this press release Statistics Portugal provides preliminary information regarding the evolution of weekly deaths that occurred in national territory up to the 35th week of 2020 (August 24th to 30th) and provides a comparison with the average number of deaths for the same period from the last five years (2015-2019).

Information on deaths is obtained through the Civil Register collected under the Integrated Civil Registration and Identification System (SIRIC) until September 8th. This time lag prevents the disclosed information from being subjected to considerable revisions. Even so, the information referring to 2020 is preliminary and will be subject to subsequent update.

One of the most dramatic consequences of the COVID-19 pandemic concerns the increase in the total number of deaths. The number of COVID-19 deaths provides only a partial measure of these effects. A more comprehensive measure of the impact on mortality may be provided by the difference between the total number of deaths observed in 2020, by all causes of death, and the average number of deaths for the last five years (2015-2019), even though there are other known effects on mortality, such as seasonal flu and spikes or hot or cold waves.

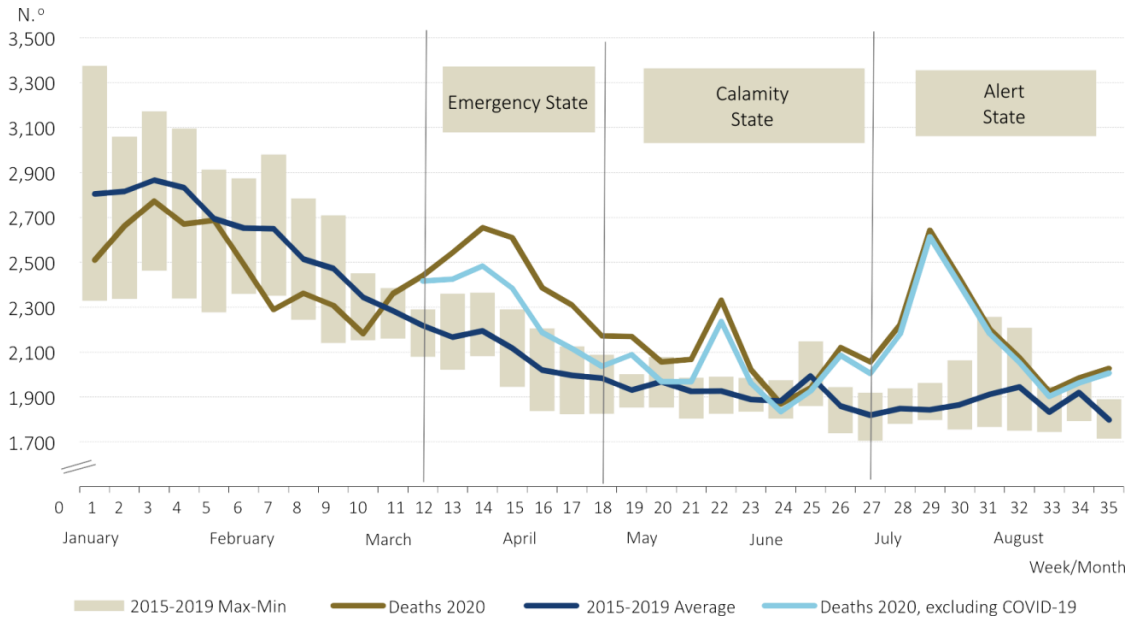
Number of deaths in 2020 higher than in previous years

According to preliminary data on deaths, up to August 30th 2020, 79,860 deaths were registered in national territory, a value higher than observed in previous years. Compared to the average number of deaths for the 2015-2019 homologous period, there were 4,791 more deaths in 2020.

In the first two months of 2020, the number of deaths was, in general, lower than the values observed in the last five years. However, while in previous years mortality continued to decrease in subsequent months, in March 2020 the number of deaths started to increase. In week 11 (9th to15th March 2020), the number of deaths exceeded the average values recorded in recent years. In Figure 1, the shaded bars, defined by the minimum and maximum value of deaths recorded per week in any of the five years between 2015 and 2019, provide an indication of the range of variation in the number of deaths in the considered period. It shows that the number of deaths in 2020 was, from the beginning of March, in general, above the upper limit of this range of values.

Between March 2nd, when the first cases of COVID-19 disease were diagnosed in Portugal, and August 30th, that is, between weeks 10 (March 2nd to 8th) and 35 (August 24th to 30th) there were 57,971 deaths, 6,312 above the average number of deaths observed in the same period from 2015-2019.

Figure 1: Deaths 2020 and average 2015-2019, by week, Portugal, weeks 1 to 35



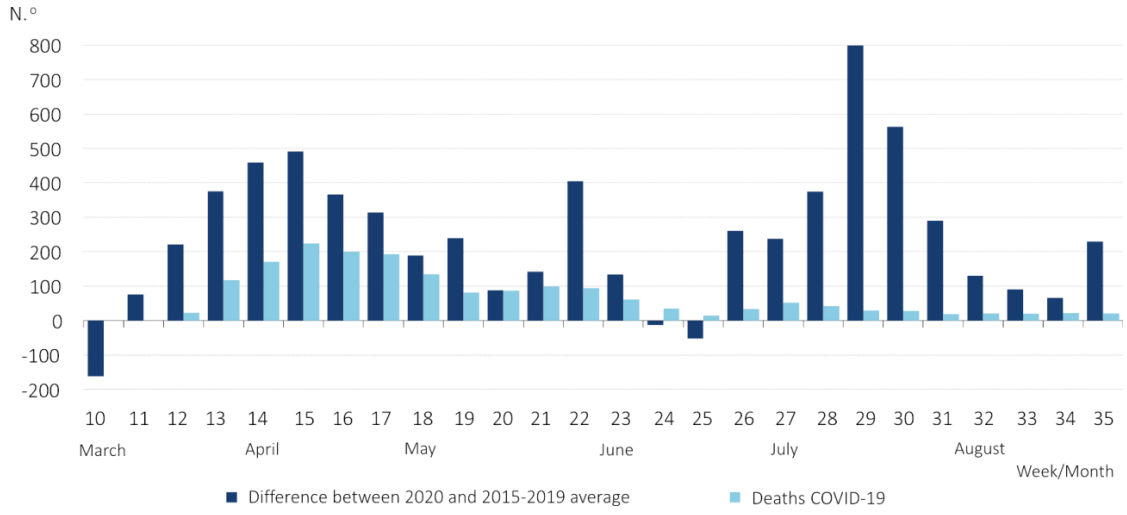
Source: Statistics Portugal, Deaths. Directorate-General of Health, Daily COVID-19 Status Report.

The first death as a result of COVID-19 was recorded on March 16th 2020, and the first period of the State of Emergency in Portugal was declared on March 19th. Between March 16th (first day of week 12) and May 3rd (end of week 18), the day when the transition from the State of Emergency to the State of Calamity took place, Portugal recorded 2,417 more deaths than the average of the last 5 years for the identical period.

The increase in deaths in 2020 compared to the 2015-2019 average peaked at week 15 (April 6th to 12th), gradually decreasing until the end of the State of Emergency period (May 3rd). At the end of May (week 22: 25th to 31st May), there was a new peak in mortality. In weeks 24 and 25 (June 8th to 21st) mortality returned to the values of previous years. From week 26 (June 22nd to 28th) there was an increase in mortality in 2020 compared to the average of the same period, reaching its highest point in week 29 (July 13th to 19th), with an additional number of around 800 deaths, which cannot be dissociated from the fact that the month of July 2020 was extremely hot with several hot waves. In the last few weeks there has been a lower increase in the number of deaths.

The increase in mortality from of March onwards, in relation to the average of the last five years is only partially explained by the number deaths caused by COVID-19. In Figure 2, the bars represent the total weekly death differential relative to the 2015-2019 average for the same period and the number of COVID-19 deaths.

Figure 2: Difference between deaths 2020 and 2015-2019 average, by week, Portugal, weeks 1 to 35



Source: Statistics Portugal, Deaths. Directorate-General of Health, Daily COVID-19 Status Report.

Portugal in the European context

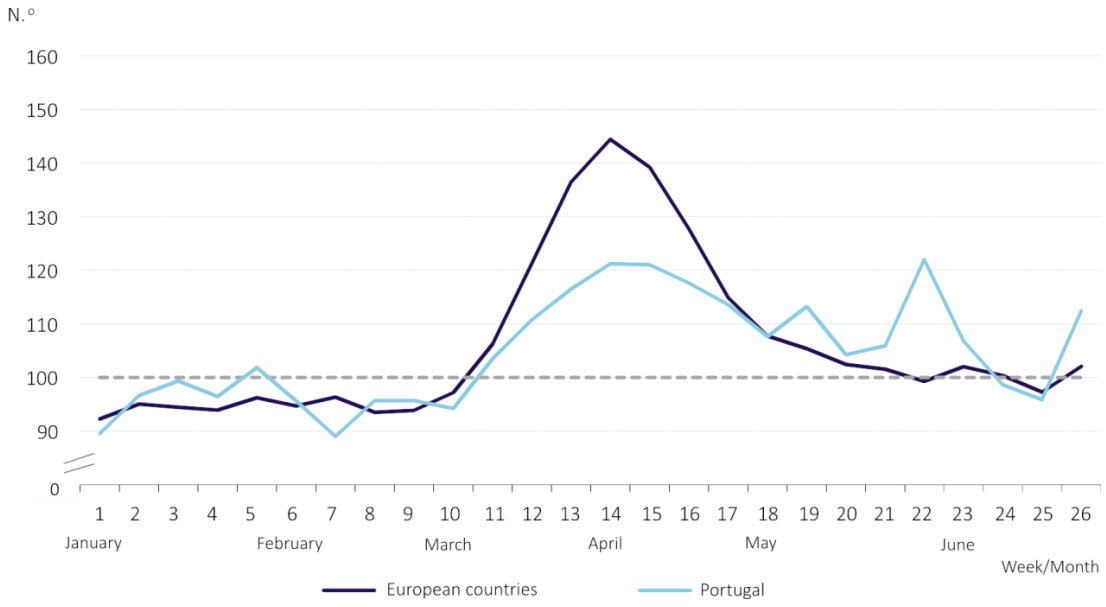
Considering as a basis for comparison the information on 24 European countries[1] that submitted data to Eurostat on the number of deaths per week and for all weeks of years 2016 to 2019, the mortality in the first weeks of 2020 was below the average values observed over the 2016-2019 period.

From the beginning of March 2020, contrary to what has been observed in recent years, there was a significant increase in the number of deaths, reaching a peak in week 14 (March 30th to April 5th), with 44% more deaths than in the same weeks of 2016-2019. Mortality in Portugal followed a similar pattern, however showing a lower difference in relation to the 2016-2019 average, just under 25% more deaths. In the following weeks, mortality in Europe was closer to the average. In Portugal, despite an initial period where there was a reduction in mortality, it increased again, remaining far from the average until week 23.

[1] Considered countries: Belgium, Bulgaria, Czechia, Denmark, Germany, Estonia, Spain, France, Italy, Latvia, Lithuania, Luxembourg, Hungary, Netherlands, Austria, Poland, Portugal, Slovakia, Finland, Sweden, Iceland, Liechtenstein, Norway and Switzerland. Due to missing or incomplete data, the following countries were not included: Ireland, Greece, Croatia, Cyprus, Malta, Romania, Slovenia and the United Kingdom.

It should be noted that 2015 was not included in the base comparison period due to the lack of data for some of the countries. Information is currently available up to week 26.

Figure 3: Deaths in 2020 compared to 2016-2019 average (2016-2019 average = 100), by week, Portugal and 24 European countries, weeks 1 to 26



Note: 24 countries: Belgium, Bulgaria, Czechia, Denmark, Germany, Estonia, Spain, France, Italy, Latvia, Lithuania, Luxembourg, Hungary, the Netherlands, Austria, Poland, Portugal, Slovakia, Finland, Sweden, Iceland, Liechtenstein, Norway and Switzerland.

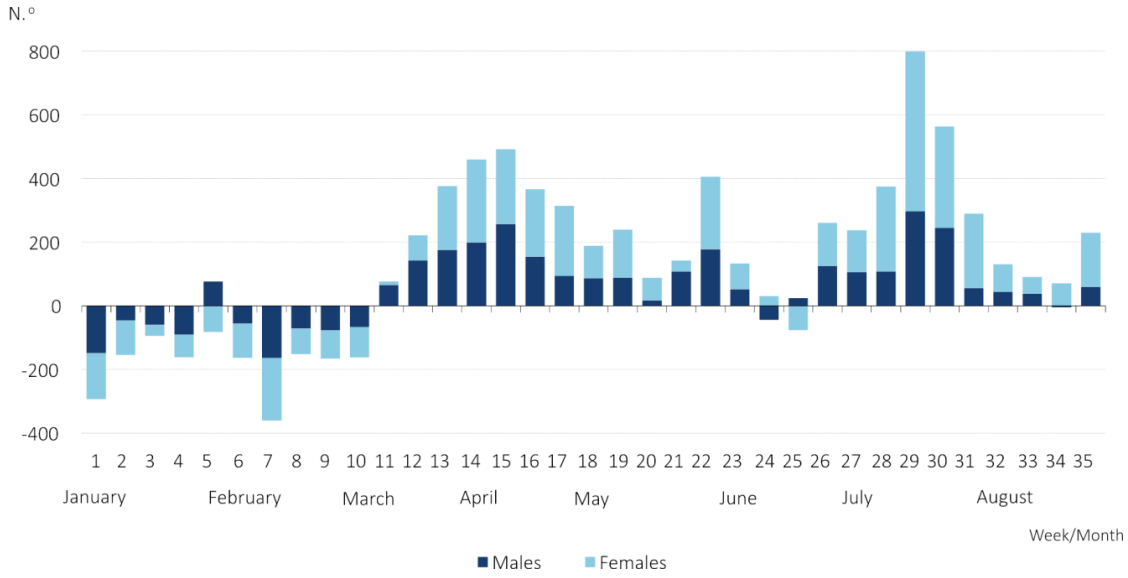
Source: INE calculations based on Eurostat's online database (extracted on 9/11/2020).

Higher initial male mortality surpassed by the increase in the number of deaths of women

Between March 2nd and August 30th, that is, between weeks 10 (March 2nd to 8th) and 35 (August 24th to 30th), there were 28,400 deaths of men and 29,391 of women, an increase of 2,597 and 3,715 deaths, respectively, compared to the average of deaths observed in the same period of 2015-2019.

In weeks 11 and 12, excess mortality resulted mainly from the increase in male deaths. From that moment, the contribution of female deaths to the increase in the number of deaths was generally higher, especially in the month of July (weeks 28 to 32).

Figure 4: Difference bewteen deaths in 2020 and 2015-2019 average, by week and sex, Portugal, weeks 1 to 35

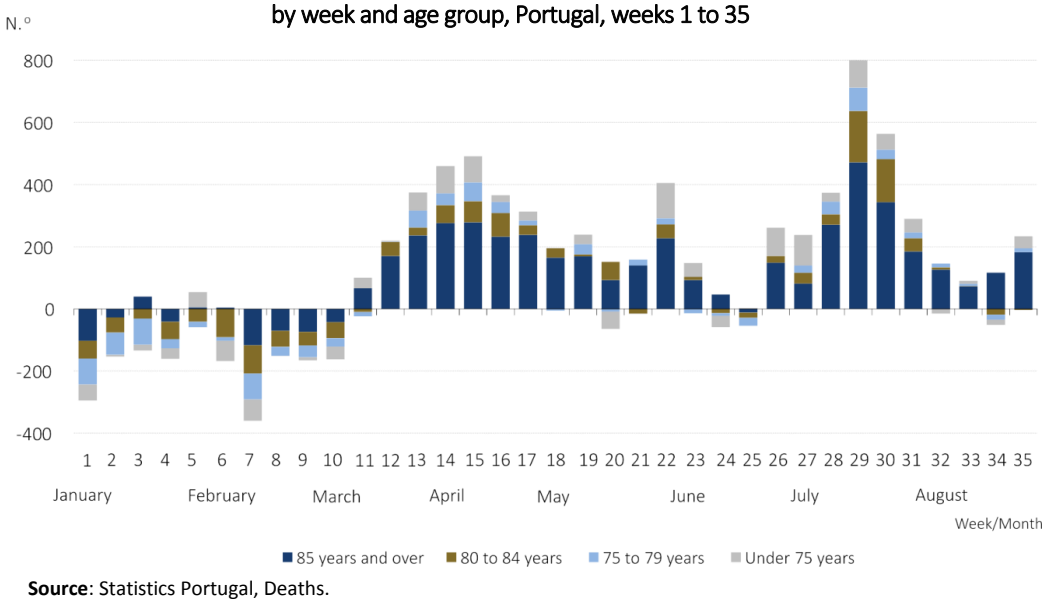


Source: Statistics Portugal, Deaths.

Higher mortality among people aged 75 and over

Between March 2nd and August 30th 2020 (weeks 10 to 35), more than 70% of deaths (41,370 deaths) were of people aged 75 years and over and, of these, 60% (24,846) were of people aged 85 and over. Compared to the average number of deaths observed in the same period of 2015-2019, more 5,518 people aged 75 and over died, of which 4,371 were 85 or older.

Figure 5: Difference between deaths in 2020 and 2015-2019 average, by week and age group, Portugal, weeks 1 to 35



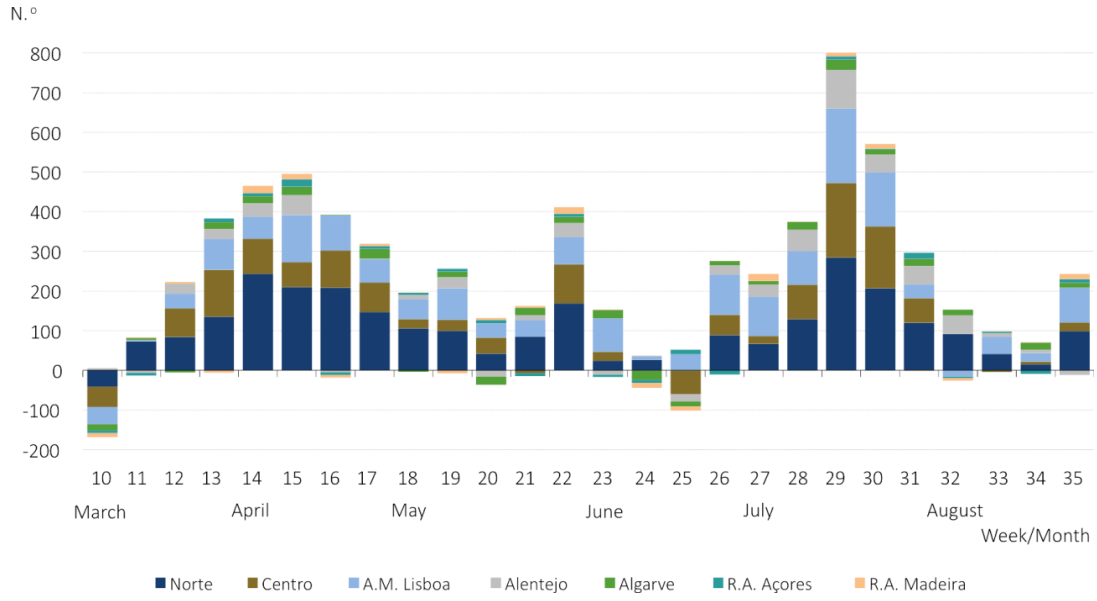
Source: Statistics Portugal, Deaths.

Regions Norte, Centro and Área Metropolitana de Lisboa with the greatest contribution to excess mortality

Between March 2nd and August 30th (weeks 10 to 35), compared to the average number of deaths observed in the same period of 2015-2019, the largest increase in the number of deaths was registered in the region Norte (+2,752 deaths), followed by the Área Metropolitan de Lisboa Area (+1,592 deaths), the Centro (+1,192 deaths), the Alentejo (+521 deaths), the Algarve (+217 deaths) and the autonomous regions of Madeira and the Açores (+69 and +57, respectively).

Comparing the number of deaths per week with the average of deaths in the period 2015-2019, the excess of deaths recorded in week 11 (March 9th to 15th) is explained by the increase in deaths recorded in the region Norte. Although the Norte region remains the greatest contributor to the increase in the number of deaths between weeks 13 (March 23 to 29) and 22 (April 25 to May 31), the contributions of the remaining regions increased, in particular the Centro and Área Metropolitana de Lisboa regions. In weeks 23 and 25 to 27, the greatest contribution to the increase in the number of deaths was in the Área Metropolitana de Lisboa. From this moment the Norte goes back to being the region with the highest contribution to the overall increase in the total number of deaths.

Figure 6: **Difference between deaths in 2020 and 2015-2019 average, by week and regions Nuts 2, weeks 10 to 35**



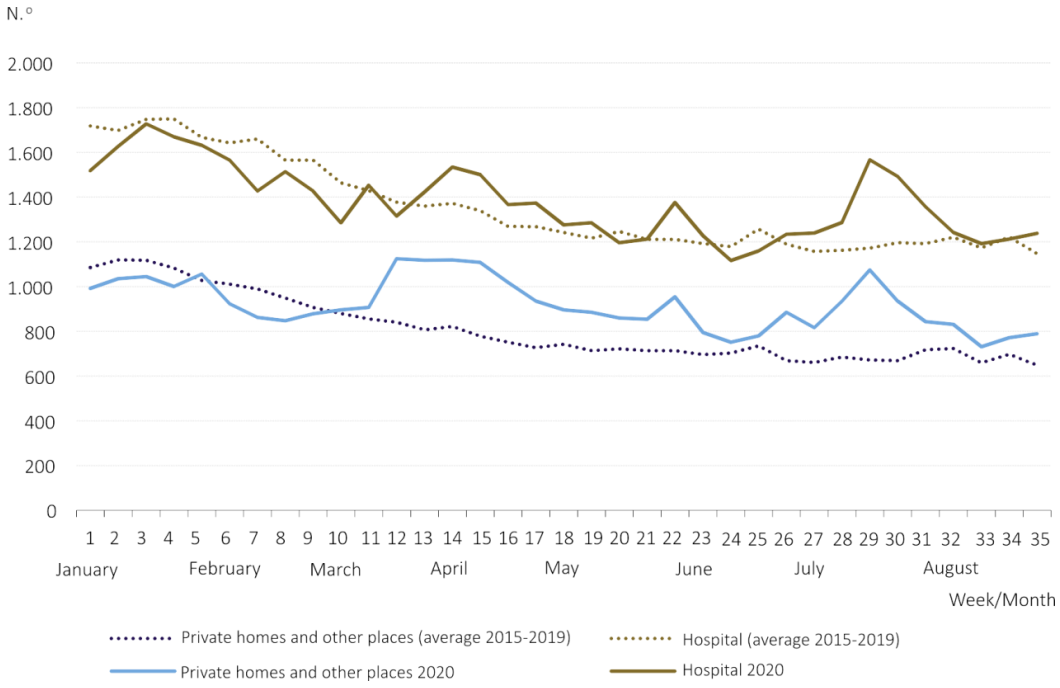
Source: Statistics Portugal, Deaths.

Mortality outside hospital (at private homes and other locations) higher than in previous years

Of the 57,971 deaths recorded between March 2nd and August 30th 2020, 34,167 took place in a hospital and 23,624 occurred outside the hospital context, corresponding to an increase of 1,695 deaths and 4,617 deaths, respectively, compared to 2015-2019 average of deaths over the same period. The excess of deaths outside the

hospital context is important throughout all weeks, but especially until the beginning of June (week 23). In the last few weeks, the increase in deaths was more evenly distributed between the hospital and outside.

Figure 7: **Deaths 2020 and 2015-2019 average, by week and place of occurence, Portugal, weeks 1 to 35**



Source: Statistics Portugal, Deaths.

TECHNICAL NOTE

Statistics Portugal releases the preliminary weekly deaths for 2020, based on the information registered in the Civil Register Offices until September 8th 2020.

Data on deaths is obtained from statistical operations of direct and exhaustive collection on live births and deaths in Portuguese territory using facts that are subject to compulsory civil registration (birth and death) in the Sistema Integrado do Registo e Identificação Civil (SIRIC).

In addition to administrative information obtained from Civil Register Offices, Statistics Portugal collects an additional set of variables identified as statistically pertinent to the National Statistic System (NSS) and the European Statistical System (EES).

Data is recorded and sent electronically, in compliance with the requirements set out by Statistics Portugal and laid down in liaison with the Instituto de Registos e Notariado (IRN) and the Instituto de Gestão Financeira e Equipamentos da Justiça (IGFEJ).

DEFINITIONS:

Death: The permanent disappearance of vital functions.

Detailed methodological information available at: **www.ine.pt**, option Products, Metadata system.

Detailed statistical information available at: **www.ine.pt**, option Products, Statistical data, database, theme Population, subtheme Mortality and life expectancy.

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