April 16<sup>th</sup> 2021 WEEKLY DEATHS – preliminary data Weeks 12 and 13 of 2021

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

## DEATHS BETWEEN MARCH 22<sup>ND</sup> AND APRIL 4<sup>TH</sup> REMAINED BELOW THE 2015-2019 AVERAGE

Between March 22<sup>nd</sup> to April 4<sup>th</sup> (weeks 12 and 13), there were 2,047 and 2,106 deaths in Portugal, respectively, 172 and 60 fewer deaths than the 2015-2019 average. The number of deaths due to COVID-19 was 59 and 42, representing, respectively, 2.9% and 2.0% of the total deaths.

Of the 4,153 deaths recorded between March 22<sup>th</sup> and April 4<sup>th</sup>, 72.1% corresponded to people aged 75 years and over. Compared to the 2015-2019 average, the number of deaths has decreased in all age groups. The greatest relative reduction was observed in the age group 65 to 69 years (-9.3%).

The regions Norte, Centro and Área Metropolitana de Lisboa accounted for 80.8% of deaths. In terms of the number of deaths per 100 thousand inhabitants, the regions Norte (34.8) and Área Metropolitana de Lisboa (39.4) had, in these two weeks, values lower than the national (40.4).

In this period, 62.6% of deaths occurred in hospitals.

During the **first year of the pandemic**, between March 2020 and February 2021, there were 134,278 deaths in Portugal, 20.8% more (23,089 deaths) than the 2015-2019 average for the same period. The number of deaths by COVID-19 was 16,351, corresponding to 12.2% of the total and 70.8% of the excess mortality observed.

In this press release Statistics Portugal provides preliminary data regarding the number of deaths that occurred in the national territory, per week, until the 13<sup>th</sup> week of 2021 (March 22<sup>nd</sup> to April 4<sup>th</sup>), making a comparison with the average number of deaths for the same period of 2015-2019. The average for 2015 to 2019 provides a reference for the number of deaths expected per week in a normal (non-pandemic) year, considering that there is an excess of mortality when the number of deaths exceeds the average number of that period.

Information on deaths is obtained through the Civil Register collected under the Integrated Civil Registration and Identification System (SIRIC) until April 13<sup>th</sup> 2021. The information is preliminary and will be subject to updates.

WEEKLY DEATHS- Preliminary Data - weeks 12 and 13 of 2021

## In the weeks 12 and 13 of 2021 the number of deaths remained below the average of 2015-2019

From the last week of 2020 (December 28<sup>th</sup> 2020 to January 3<sup>rd</sup> 2021), the number of deaths increased sharply until the 3<sup>rd</sup> week of 2021 (January 18<sup>th</sup> to 24<sup>th</sup>), reaching in that week the highest number of weekly deaths observed since the beginning of the pandemic (5,037). However, it was in the following week (January 25<sup>th</sup> to 31<sup>st</sup>) that the highest number of deaths by COVID-19 (2,036) was recorded since the beginning of the pandemic, from that week onwards the total number of deaths began to decrease. From the 9<sup>th</sup> week onwards, the number of deaths decreased to values below the 2015-2019 average. In the 12<sup>th</sup> week (March 22<sup>nd</sup> to 28<sup>th</sup>) the number of deaths continued to decrease. That week, there were 2,047 deaths in Portugal. However, in the following week (March 29<sup>th</sup> to April 4<sup>th</sup>) there was a slight increase in mortality, to 2,106 deaths. The number of deaths by COVID-19 in the 12<sup>th</sup> and 13<sup>th</sup> weeks was 59 and 42, representing, respectively, 2.9% and 2.0% of total deaths.

In Figure 1, the shaded bars, defined by the minimum and maximum values of deaths 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, from the beginning of March 2020 to the end of February 2021, the number of deaths was, in general, above the upper limit of this range of values. In the last five weeks the number of deaths decreased to values below the 2015-2019 average, reaching in week 10 to 12 values below the minimum observed in that period.

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.

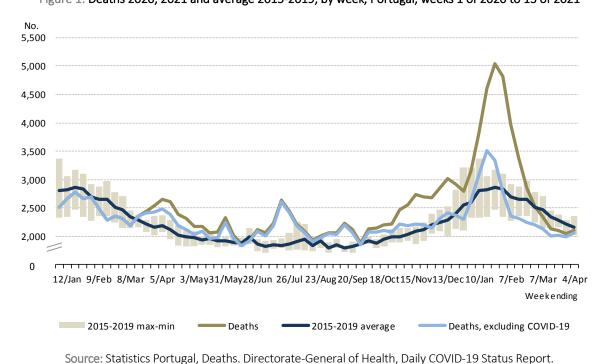
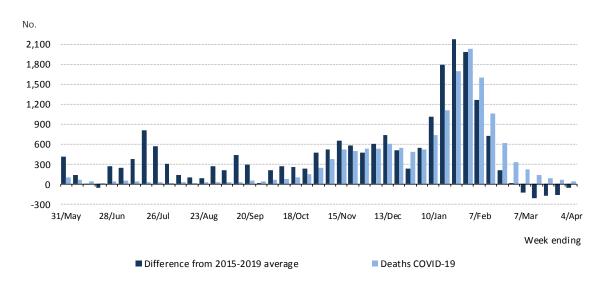


Figure 1: Deaths 2020, 2021 and average 2015-2019, by week, Portugal, weeks 1 of 2020 to 13 of 2021

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Figure 2: Difference between deaths 2020, 2021 and 2015-2019 average and COVID-19 deaths, by week, Portugal, weeks 22 of 2020 to 13 of 2021



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

# Male mortality remains slightly higher than female mortality

Between March 22<sup>nd</sup> and April 4<sup>th</sup> (weeks 12 and 13), there were 2,096 deaths of men and 2,057 of women, a decrease of 65 and 167 deaths, respectively, compared with the 2015-2019 average of deaths in the same weeks. The number of deaths of men, which at the 12<sup>th</sup> week was 1,029, increased to 1,067 in the 13<sup>th</sup> week, representing, respectively, 21.2 deaths per 100 thousand men at week 12 and 22.0 deaths at week 13. The number of deaths of women was in the 12<sup>th</sup> week of 1,018, representing 18.7 deaths per 100 thousand women. In the following week it increased slightly to 1,039 deaths, corresponding to 19.1 deaths per 100 thousand women.

# The greatest percentage reduction, compared to the 2015-2019 average, occurred in age group 65 to 69 years old

Between March 22<sup>nd</sup> and April 4<sup>th</sup>, 72.1% of deaths (2,993 deaths) were of people aged 75 years and over and, of these, 59.3% (1,744) were of people aged 85 and over. Compared to the 2015-2019 average, the number of deaths decreased in all age groups, with the exception of age group 90 years and over, that registered a slightly increase (4 more deaths). The greatest percentage reduction occurred in the age group 65 to 69 years old, minus 9.3% (less 26 deaths).

## Norte and Área Metropolitana de Lisboa with the lowest number of deaths per 100 thousand inhabitants

Between March 22<sup>nd</sup> and April 4<sup>th</sup> (weeks 12 and 13) there were 1,245 deaths in the region Norte (30.0% of the total), 985 (23.7%) in Centro, 1,127 (27.1%) in Área Metropolitana de Lisboa, 368 (8.9%) in Alentejo, 204 (4.9%) in Algarve, 108 (2.6%) in Região Autónoma dos Açores and 109 (2.6% of the total) in Região Autónoma da Madeira.

In relative terms, the highest number of deaths per 100 thousand inhabitants was registered in Alentejo (52.2 deaths), followed by Algarve (46.6), Região Autónoma dos Açores (44.5), Centro (44.4) and Região Autónoma da Madeira (42.9), with values higher than the national (40.4).

## More than 60% of deaths occurred in hospitals

Of the total of 4,153 deaths recorded between March 22<sup>nd</sup> and April 4<sup>th</sup> (weeks 12 and 13), 2,598 (62.6%) took place in a hospital and 1,555 (37.4%) occurred outside the hospital context (at private homes and other places), corresponding, respectively, to decreases of 139 and 93 deaths compared with the average number of deaths observed in the same weeks of 2015-2019.



Table 1: Deaths 2021 and 2015-2019 average by week, Portugal, weeks 11 to 13 of 2021

	Week 11 of 2021 (March 15 <sup>th</sup> to 21 <sup>st</sup> )					Week 12 of 2021 (March 22 <sup>nd</sup> to 28 <sup>th</sup> )				Week 13 of 2021 (March 29 <sup>th</sup> to April 4 <sup>th</sup> )					
	Deaths (No.)	Deaths per 100 000 inhab.	2015-2019 deaths average (homologous week)	Change relative to the 2015-2019 average		Deaths (No.)	Deaths per	2015-2019 deaths average	Change relative to the 2015-2019 average		Deaths (No.)	Deaths per 100 000	2015-2019 deaths average	Change relative to the 2015-2019 average	
				Absolute values	%	Deaths (No.)	inhab.	(homologous week)	Absolute values	%	Deaths (No.)	inhab.	(homologous week)	Absolute values	%
Total	2,109	20.5	2,284	-175	-7.7	2,047	19.9	2,219	-172	-7.8	2,106	20.5	2,166	-60	-2.8
Sex															
Males	1,067	22.0	1,156	-89	-7.7	1,029	21.2	1,083	-54	-5.0	1,067	22.0	1,078	-11	-1.0
Females	1,042	19.2	1,128	-86	-7.6	1,018	18.7	1,135	-117	-10.3	1,039	19.1	1,089	-50	-4.6
NUTS 2															
Norte	632	17.7	697	-65	-9.3	627	17.5	706	-79	-11.2	618	17.3	667	-49	-7.3
Centro	493	22.2	579	-86	-14.9	473	21.3	552	-79	-14.3	512	23.1	536	-24	-4.5
AM Lisboa	570	19.9	566	4	0.7	558	19.5	527	31	5.9	569	19.9	547	22	4.0
Alentejo	203	28.8	223	-20	-9.0	167	23.7	208	-41	-19.7	201	28.5	211	-10	-4.7
Algarve	103	23.5	104	-1	-1.0	109	24.9	107	2	1.9	95	21.7	100	-5	-5.0
RA Açores	47	19.4	53	-6	-11.3	51	21.0	53	-2	-3.8	57	23.5	44	13	29.5
RA Madeira	53	20.8	55	-2	-3.6	59	23.2	58	1	1.7	50	19.7	55	-5	-9.1
Age group															
Under 65 years	308	3.8	326	-18	-5.5	290	3.6	314	-24	-7.6	284	3.5	311	-27	-8.7
65 to 69 years	148	23.8	147	1	0.7	135	21.7	147	-12	-8.2	118	18.9	132	-14	-10.6
70 to 74 years	171	31.1	182	-11	-6.0	155	28.2	184	-29	-15.8	178	32.4	175	3	1.7
75 to 79 years	236	54.6	282	-46	-16.3	252	58.3	276	-24	-8.7	268	62.0	248	20	8.1
80 to 84 years	352	99.6	399	-47	-11.8	349	98.8	390	-41	-10.5	380	107.6	406	-26	-6.4
85 to 89 years	431 463	192.1	482 466	-51	-10.6	400	178.3 474.2	450 458	-50 8	-11.1	437	194.8 448.7	449	-12 -4	-2.7 -0.9
90 years and over	463	471.1	466	-3	-0.6	466	4/4.2	458	8	1.7	441	448.7	445	-4	-0.9
Place of occurrence					_					_					_
Hospital	1,310	-	1,429	-119	-8.3	1,255	-	1,378	-123	-8.9	1,343	-	1,359	-16	-1.2
Another location	799	-	855	-56	-6.5	792	-	841	-49	-5.8	763	-	807	-44	-5.5

#### Notes:

Source: Statistics Portugal, Deaths and Annual Provisional Estimates of Resident Population December 31<sup>st</sup> 2019.

WEEKLY DEATHS- Preliminary Data - weeks 12 and 13 of 2021

<sup>(1)</sup> Data for 2021 are preliminary.

<sup>(2)</sup> The total number of deaths may not correspond to the sum of the partial figures by sex and residence, due to the existence of records with unknown sex and residence and because it includes deaths in Portugal from residents abroad.

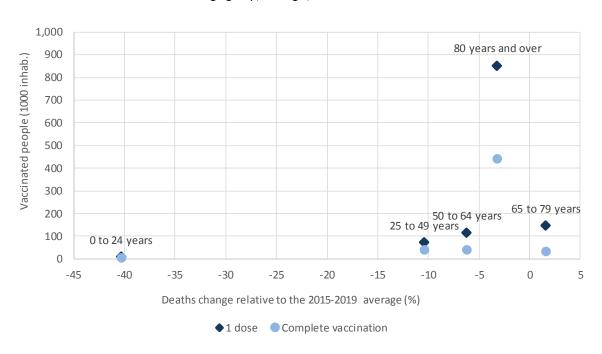
<sup>(3)</sup> The week is defined according to ISO 8601. Every week has 7 days, starts on a Monday and ends on a Sunday. The first week of the year is the one that contains the first Thursday of the year.

### Vaccination in Portugal

By April 4<sup>th</sup> (last day of the 13<sup>th</sup> week), 1,334,338 people had been vaccinated with the first dose, 579,069 of whom had already completed the vaccination. These figures correspond to a vaccination coverage of 129.6 and 56.2 people per 1,000 inhabitants. It is people aged 80 and over who have the highest vaccination coverage: 853.1 and 442.2 persons per 1,000 inhabitants, respectively, for the first dose and complete vaccination. For this age group, in that week, the number of deaths decreased by 3.2% in relation to the 2015-2019 average.

For the remaining age groups, vaccination coverage is between 8.8 and 147.7 per 1,000 inhabitants, for the first dose, and between 4.6 and 40.2 per 1,000 inhabitants, for the second. For the age groups 0-24 years, 25-49 years and 50-64 years, the number of deaths decreased by 8.7%, compared to 2015-2019. Only for the age group 65-79 years there was an increase in the number of deaths (1.6%).

Figure 3: Vaccinated people per 1,000 inhabitants and percentage change in deaths compared to 2015-2019 average, by age group, Portugal, week 13 2021



Source: Statistics Portugal, Deaths. Directorate-General of Health, Weekly vaccination report.

### Portugal in the European context

Among the set of European countries that submitted data to Eurostat (see table 2) on the number of weekly deaths for 2021, and for all weeks from years 2016 to 2019 as a basis for comparison, Portugal was in January one of the countries with the highest excess mortality: 59% more deaths than the 2016-2019 average, ranking 2<sup>nd</sup>, only behind Slovakia (77% more).

In week 5 (February 1<sup>st</sup> to 7<sup>th</sup>), Portugal registered 50% more deaths than the 2016-2019 average, the country with the highest excess mortality among those countries with available information. In the following weeks, Portugal's position began to improve and mortality approached the 2016-2019 average. In weeks 10 and 11 (March 8<sup>th</sup> to 21<sup>st</sup>), mortality decreased to values below the 2016-2019 average.

Table 2: Monthly and weekly deaths in 29 European countries, 2020 and 2021, compared to 2016-2019 average (2016-2019 average = 100)

			•		•						
Countries	2021	Weeks 5 to 11 of 2021									
Countries	January	February 1 <sup>st</sup> to 7 <sup>th</sup>	February 8 <sup>th</sup> to 14 <sup>th</sup>	February 15 <sup>th</sup> to 21 <sup>st</sup>	February 22 <sup>nd</sup> to 28 <sup>th</sup>	March 1 <sup>st</sup> to 7 <sup>th</sup>	March 8 <sup>th</sup> to 14 <sup>th</sup>	March 15 <sup>th</sup> to 21 <sup>th</sup>			
Austria	109	103	99	97	92	91	102	х			
Belgium	101	94	91	96	85	82	92	90			
Bulgaria	99	101	101	109	114	121	138	156			
Croatia	108	106	104	102	95	х	×	х			
Cyprus	112	93	84	102	89	94	93	92			
Czechia	153	133	138	140	146	157	×	х			
Denmark	111	105	94	91	82	84	91	85			
Estonia	112	102	117	102	119	127	131	136			
Finland	95	96	95	104	100	97	91	95			
France	110	111	112	112	104	102	106	108			
Germany	122	106	101	97	88	87	91	96			
Greece	х	93	97	102	107	х	x	х			
Hungary	103	93	95	99	106	105	119	х			
Italy	104	х	х	х	х	х	x	х			
Latvia	129	128	116	107	104	95	102	102			
Lithuania	126	106	114	103	91	104	112	105			
Luxembourg	109	98	90	110	98	89	141	х			
Malta	101	97	106	96	137	133	155	119			
Netherlands	118	111	106	104	96	92	100	98			
Poland	126	109	111	115	111	111	117	х			
Portugal	159	152	131	116	105	101	94	96			
Romania	х	109	103	104	75	х	x	х			
Slovakia	177	162	173	161	146	х	х	х			
Slovenia	127	112	93	93	101	105	100	103			
Spain	118	125	115	107	104	100	100	100			
Sweden	115	97	97	93	92	87	94	93			
Liechtenstein	114	105	84	104	76	х	х	х			
Norway	93	91	90	87	85	79	83	69			
Switzerland	121	96	96	88	86	85	89	80			

Source: Weeks 5 to 11 2021: Statistics Portugal calculations based on online Eurostat <u>database</u> (extracted on 13/04/2021); Month of January 2021: adapted from Eurostat indicator on <u>Excess mortality – monthly data</u>.

### ONE YEAR OF COVID-19 PANDEMIC: MORTALITY BETWEEN MARCH 2020 AND FEBRUARY 2021

During the first year of COVID-19 pandemic, between March 2020 and February 2021, there were 134,278 deaths in Portugal, 20.8% more (23,089 deaths) than the 2015-2019 average for the same period. The number of deaths by COVID-19 was 16,351, corresponding to 12.2% of the total and 70.8% of the observed excess mortality.

In the first two months of 2020, the number of deaths was lower than the average values observed in the last five years. Contrary to past trends, in March 2020, the month in which the first cases of COVID-19 disease were diagnosed in Portugal, mortality started to increase. Between March 2020 and February 2021, to a greater or lesser extent, in all months there was an increase in the number of deaths compared to the average of 2015-2019, reaching a first peak in April, to which deaths by COVID-19 contributed in part. A new maximum of deaths was reached in mid-July, despite the reduced contribution of the number of deaths by COVID-19 to the increase in mortality that month. As the end of the year and the beginning of 2021 approached, this increase was increasingly explained by the increase in deaths due to COVID-19.

In the month of January 2021, there was the highest number of monthly deaths observed since the beginning of the pandemic (19,631), an excess mortality of 56.2% mortality compared to the 2015-2019 average. Of the total deaths, 5,785 were due to COVID-19, representing 29.5% of mortality in January and the maximum of monthly deaths due to COVID-19. Mortality reduced in February to 12,710 deaths, still an excess mortality in relation to the 2015-2019 average (+21.7%).

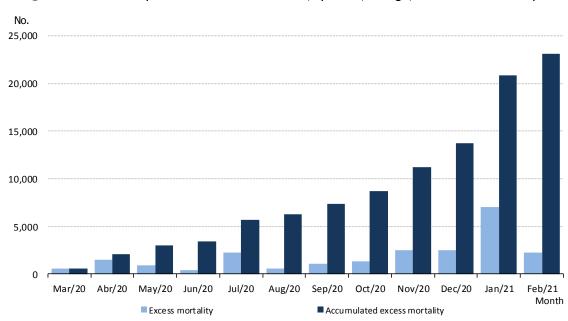


Figure 4: Excess mortality in the month and accumulated, by month, Portugal, March 2020 to February 2021

Source: Statistics Portugal, Deaths.

### **TECHNICAL NOTE**

Statistics Portugal releases the preliminary weekly deaths, based on the information registered in the Civil Register Offices until April 13<sup>th</sup> 2021.

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).

In this release data on provisional annual estimates of resident population referenced to December  $31^{st}$  2019, released on June  $15^{th}$  2020 (latest figures available), are used in computing the indicators per 100 thousand inhabitants.

Data on the number of deaths by COVID-19 are also used, whose source is the daily situation report COVID-19 of the Directorate-General for Health that provides only a partial measure of the pandemic on mortality. A more comprehensive measure of the impact on mortality may be provided by the difference between the total number of deaths, by all causes of death, and the average number of deaths for 2015-2019, even though there are other known effects on mortality, such as seasonal flu and spikes or hot or cold waves. Thus, it is considered that there is an excess of mortality when the number of deaths, during a certain period of time, exceeds the number of deaths expected for that period, in this case, the average of the period 2015-2019.

Data on the number of people vaccinated with the first dose and with complete vaccination are also used whose source is the weekly vaccination report of the Directorate-General for Health.

### **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.