

Press Release

10 December 2020

Deaths according to cause of death Advance January-May 2019 and 2020

23.0% of deaths in the first five months of 2020 were caused by circulatory system diseases

Infectious diseases, which include COVID-19, virus identified and COVID-19, virus suspected, were the second leading cause of death (20.9% of the total), surpassing tumours (20.4%)¹

During the January-May 2020 period, there were 231,014 deaths in Spain, 43,537 more than in the same period of the previous year (23.2% more). By sex, 278,371 men (a 21.9% increase) died, and 115,473 women (a 24.6% increase).

The variation in the number of deaths in this period showed a distinct trend in the months of January and February and in those from March to May. The number of deaths decreased by 4.3% during January and February compared to the same period in 2019 (with 3,568 less). For its part, in the period from March to May 2020, the number of deaths increased by 44.8% (with 47,105 more).



Monthly deaths January-May. Years 2020 and 2019. Absolute Values

¹ To interpret the information on COVID-19 related deaths in this Statistic, it is important to note that in March 2020, the World Health Organization (WHO) incorporated two new codes into the current International Classification of Diseases (ICD-10): *COVID-19, virus identified* to characterize deaths in which the deceased had been identified as having this pathology and *COVID-19 virus not identified (suspected)* to refer to deaths in which the virus was not identified in the deceased person, but in which the doctor suspected that it could have been present, due to the presentation of symptoms compatible with the disease. Statistics are prepared based on the Medical Death Certificates and the application of the WHO standards. Further information in the methodological note.

Most of the deaths were due to *natural causes (diseases)*. In the first five months of 2020, 225,164 people died from such causes, or 97.5% of the total. This figure was 24.4% higher than the same period of the previous year. The increase was more pronounced in the months of March to May (47.2%).

On the other hand, *external causes* fell by 10.7% in the first five months of the year, a decrease that reached 17.8% during the months of March to May.

Main causes of death by disease group

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Diseases of the circulatory system remained the leading cause of death, with 23.0% of the total (and a rate of 112.2 deaths per 100,000 inhabitants).

Infectious diseases, which include *COVID-19*, *virus identified* and *COVID-19*, *virus suspected*, were the second leading cause of death with 20.9% of the total (and a rate of 102.0), surpassing *tumours* (with 20.4% of the total and a rate of 99.6). *Respiratory diseases* ranked as the fourth cause of death, with 10.0% of the total and a rate of 48.9 deaths per 100,000 inhabitants.

Deaths by ICD-10 chapters. January - May 2020

Absolute values and percentages

ICD-10 Chapters	Deaths	%
Total Deaths	231,014	100.0
Diseases of the circulatory system	53,201	23.0
Infectious and parasitic diseases(1)	48,393	20.9
Neoplasm	47,222	20.4
Diseases of respiratory system	23,171	10.0
Diseases of nervous system	12,392	5.4
Mental and behavioural disorders	9,703	4.2
Diseases of digestive system	8,977	3.9
Endocrine, nutritional and metabolic diseases	6,875	3.0
Diseases of the genitourinary system	6,732	2.9
External causes	5,850	2.5
Symptoms, signs and abnormal clinical and laboratory findings	3,983	1.7
Diseases of the musculeskeletal system	2,254	1.0
Diseases if the blood and blood-forming organs and		
certain disorders involving the immune mechanism	937	0.4
Diseases of the skin and subcutaneous tissue	801	0.3
Congenital malformations, deformations and chromosomal abnormalities	357	0.2
Certain conditions originating in the perinatal period	162	0.1
Pregnancy, childbirth and the puerperium	4	0.0

(1) Identified and suspected Covid-19 virus is included in the group of infectious and parasitic diseases

Deaths from *infectious diseases* increased by 1,687.7% compared to the first five months of 2019. It should be noted that 67.5% of deaths in this group corresponded to *COVID-19, virus identified* and 26.9% to *COVID-19, virus suspected*.

For its part, the number of deaths from *tumours* increased by 0.5%, while those attributable to *respiratory diseases* fell by 6.6%. For their part, deaths from *diseases of the circulatory system* did not change.

As with the total number of deaths, the number of deaths by main disease groups reflected a different trend in the months of January and February as compared to the March to May period.

Thus, during January and February 2020, the number of deaths due to *diseases of the circulatory system* and *respiratory diseases* fell by 5.1% and 11.9%, respectively. On the other hand, tumours increased by 2.0%.

During the March to May 2020 period, deaths from *diseases of the circulatory system* increased 4.0%, while those caused by *tumours* and *respiratory diseases* decreased 0.6% and 1.2%, respectively.

Main causes of death by ICD-10 chapters

Percentage variation January-May 2020/2019



Main causes of death by age

By sex, *tumours* were the leading cause of death in men (with a rate of 121.7 deaths per 100,000 men), followed by *infectious diseases* (rate of 106.3) and *diseases of the circulatory system* (rate of 105.3).

On the other hand, *diseases of the circulatory system* were the leading cause of female mortality (118.8 deaths per 100,000), followed by *infectious diseases* (a rate of 97.9) and *tumours* (78.3).

Most frequent diseases as cause of death

At a more detailed level, in the infectious disease group, *COVID-19* was the most frequent cause of death in the first five months of 2020. In the case of *COVID-19, virus identified,* 32,652 people died (with a rate of 68.8 per 100,000 inhabitants) and for *COVID-19, virus suspected,* 13,032 people died (with a rate of 27.5).

This was followed by *ischemic heart diseases* (with 13,015 deaths, 3.6% less than in the same period in 2019) and *cerebrovascular diseases* (with 11,317 deaths, 0.3% less).

Among the most frequent diseases, the causes of death that increased the most compared to the first five months of 2019 were *diabetes* (18.6%), *hypertensive diseases* (17.6%) and *Alzheimer's* (13.7%). These increases were more pronounced during the months of March to May (39.5%, 37.1% and 27.3%, respectively).

Deaths according to the most frequent causes of death. January - May 2020 Absolute values and percentages

COVID-19, virus identified was the leading cause of death in both sexes, with 76.1 deaths per 100,000 men and 61.9 deaths per 100,000 women.

	January-May 2020	Variation January-May 2020/2019	January- February 2020/2019	Variation January- February 2020/2019	March-May 2020	Variation March- May 2020/2019
All diseases	231,014	23.2%	78,784	-4.3%	152,230	44.8%
Covid-19 virus identified	32,652				32,652	100.0%
Covid-19 suspected	13,032				13,032	100.0%
lschaemic heart disease	13,015	-3.6%	5,479	-9.9%	7,536	1.6%
Cerebrovascular disease	11,317	-0.3%	4,714	-2.4%	6,603	1.3%
Dementia	9,294	-4.9%	3,928	-9.7%	5,369	-1.0%
Cancer of lung and bronchus	9,147	-0.4%	3,849	3.4%	5,298	-3.0%
Cardiac insufficiency	8,793	-1.0%	3,823	-4.4%	4,970	1.7%
Alzheimer disease	7,201	13.7%	2,755	-2.9%	4,446	27.3%
Acute lower respiratory infections	6,652	-5.3%	2,973	-11.3%	3,679	0.2%
Hypertensive disease	6,434	17.6%	2,361	-5.5%	4,073	37.1%
Diabetes mellitus	5,110	18.6%	1,846	-6.2%	3,264	39.5%
Pneumonia	4,910	0.4%	2,353	-5.5%	2,557	6.5%
Colon cancer	4,579	-3.1%	1,896	-2.0%	2,683	-3.9%
Renal insufficiency	3,686	2.4%	1,596	-0.3%	2,090	4.6%
Cancer of pancreas	3,058	3.7%	1,221	1.4%	1,837	5.2%

Cancer of the bronchi and lung was the second most common cause of death among men (with a rate of 30.0) followed by *COVID-19, virus suspected* (24.4).

Among women, the second most common cause was *COVID-19, virus suspected* (30.4 per 100,000 women), followed by *cerebrovascular diseases* (26.5).

Mortality from COVID-19 during the first five months of 2020

Between January and May 2020 there were 32,652 deaths in which the cause of death was *COVID-19, virus identified*. Another 13,032 people died of *COVID-19, virus suspected* due to having symptoms consistent with the disease (*unidentified COVID-19*). In March 2020, the World Health Organization incorporated these two *COVID-19* related causes of death into the International Classification of Diseases (ICD-10).

Furthermore, in 4,218 cases, doctors have certified that while *COVID-19* was not the direct cause of death - which was mainly due to other causes - *COVID-19* nonetheless contributed to the death of these people, as comorbidity. In 1,655 cases the doctors had identified the presence of COVID-19, and in 2,563 cases its presence was suspected because of symptoms compatible with the disease.

During the months of January and February, no deaths from *COVID-19* were certified. All deaths from this cause occurred thus occurred from March onwards.

The total number of deaths between the months of March and May amounted to 152,230. With *COVID-19, virus identified,* 32,652 people died, 21.4% of the total. And with *COVID-19, virus suspected,* 13,032 people died, 8.6% of the total.

The month with the highest number of deaths from this cause was April, with 18,178 deaths from *COVID-19, virus identified* and 8,127 from *COVID-19, virus suspected* (30.1% and 13.5% of the total for that month, respectively).

In March, there were 11,278 deaths from *COVID-19, virus identified* and 4,147 from *COVID-19, virus suspected* (19.6% and 7.2% of the total for that month). And in May there were 3,196 deaths from *COVID-19, virus identified* and 758 from *COVID-19, virus suspected* (9.3% and 2.2% of the total, respectively).

Compared to the previous year, excess mortality during the months of March, April and May 2020 was 47,105 deaths. The total number of deaths from *COVID-19, virus identified* represented 69.3% of this excess mortality. On the other hand, deaths from *COVID-19, virus suspected* represented 27.7%.

Deaths from COVID-19. March - May 2020

Release



Absolute Values

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In more detail, the week with the highest number of deaths from *COVID-19* was the 14th (from March 30 to April 5), with 6,687 people dying from *COVID-19, virus identified* and 3,977 from *COVID-19, virus suspected* (32, 2% and 19.2%, respectively, of the total in that week).

Following this was week 13 (from March 23 to 29), with 6,384 deaths from *COVID-19, virus identified* and 2,273 from *COVID-19. Virus suspected* (which accounted for 32.5% and 11.6% of the total this week).

		Covid-19 Virus	Covid-19 suspected	
	All deaths	identified		
2 March - 8 March	8,375	19	6	
9 March - 15 March	9,415	402	55	
16 March - 22 March	12,743	2,445	670	
23 March - 29 March	19,654	6,384	2,273	
30 March -5 April	20,767	6,687	3,977	
6 April -12 April	17,146	5,552	2,921	
13 April -19 April	13,114	4,152	1,468	
20 April -26 April	10,312	2,726	667	
27 April -3 May	8,918	1,755	384	
4 May -10 May	8,330	1,124	237	
11 May -17 May	7,425	652	153	
18 May -24 May	7,496	467	126	
25 May -31 May	7439	287	95	

Weekly deaths from COVID-19

Deaths due to COVID-19 by sex and age

Between the months of January and May 2020, 115,541 men and 115,473 women died in Spain.

A total of 17,688 men died from *COVID-19, virus identified,* while 5,682 died from *COVID-19, virus suspected*. On the other hand, 14,964 women died from *COVID-19, virus identified* and 7,350 from *COVID-19, virus suspected*.

Deaths from *COVID-19* were concentrated among the elderly. A total of 87.1% of those killed by *COVID-19, virus identified* were 70 or older, and 89.2% of those who died of *COVID-19, virus suspected* were 75 or older.

The risk of dying from *COVID-19, virus confirmed*, measured by age-specific rates, was less than 100 deaths per 100,000 inhabitants up to age 65. From that age onwards, the rates progressively increased until reaching 1,773.9 deaths per 100,000 inhabitants in the group of those 95 years and over.

In the case of *COVID-19, virus suspected,* the rates exceed 100 deaths per 100,000 inhabitants from the age of 80 onwards.

By sex, from the age of 35, age-specific rates for men were higher than those for women. In particular, between the ages of 60 and 74, male rates were more than double those for females.

Distribution of deaths from COVID-19, virus identified by sex and age groups Percentages



Distribution of deaths from suspected COVID-19 by sex and age groups Percentages



Deaths due to COVID-19 by place of occurrence

During the months of January to May 2020, 122,310 people died in hospitals, 57,135 in their private homes and 42,918 in retirement and nursing homes².

The deaths from *COVID-19, virus identified* occurred mainly in hospitals (76.4% of the total). On the other hand, the highest number of deaths from *COVID-19, virus suspected* occurred in retirement and nursing homes (55.6% of the total).

In hospital centres, 24,486 people died from *COVID-19, virus identified* and 3,958 from *COVID-19, virus suspected*. The month with the highest number of deaths from *COVID-19* was April, with 12,652 and 2,196 cases, respectively.

On the other hand, in retirement and nursing homes, 6,664 persons died from *COVID-19, virus identified* and 7,082 from *COVID-19, virus suspected*. April was also the month with the highest number of deaths (4,797 and 4,833 cases, respectively).

Finally, 844 people died in private homes from CoVID-19, virus identified (42.1% in April) and 1,634 from COVID-19, virus suspected (54.1% in April).

Most frequent complications and comorbidities in deaths from COVID-19

In deaths from January to May 2020, an average of 3.8 illnesses were reported in each certificate. This information allows us to know, in addition to the cause triggering the death, the complications derived from it, as well as the comorbidities of the person who died.

In those who died from *COVID-19, respiratory failure* and *pneumonia* were the most frequent complications reported on death certificates. Specifically, in 57.9% and 33.5%, respectively, of the deaths due to *COVID-19 virus identified,* and in 53.6% and 20.2% due to *COVID-19, virus suspected*.

The main comorbidity of persons who died from *COVID-19*, and which was included in the medical death certificate by doctors, was *hypertensive disease* (13.7% in deaths from *COVID-19*, *virus identified* and 21.0% in deaths from *COVID-19*, *virus suspected*).

For its part, *kidney failure* was the second leading comorbidity in deaths from *COVID-19, virus identified* (8.7%), and *dementia* in deaths from *COVID-19, virus suspected* (13.0%).

² People who died elsewhere (4,373 people) and those whose place of death does not appear on the death certificate (4,278 people) are not included.

Most frequent comorbidities in deaths from COVID-19 Percentages



Most frequent causes of death with COVID-19 as comorbidity

Information from death certificates also allows us to analyse the most frequent causes of death in which *COVID-19* was not the trigger for death, but was a contributing factor (listed among the comorbidities of the person who died).

In addition to the 32,652 deaths from *COVID-19, virus identified*, this disease was present as a comorbidity in another 1,655 deaths. The main causes of direct death in these deaths were *ischemic heart diseases* (132 deaths), bronchial and lung cancer (96) and *cerebrovascular diseases* (92).

On the other hand, apart from the 13,032 deaths from *COVID-19, virus suspected,* the disease indirectly contributed to 2,563 more deaths as a comorbidity. Among the leading causes of death with *COVID-19, virus suspected* as a comorbidity were *ischemic heart disease* (162 deaths), *lower respiratory tract disease* (151), and *dementia* (149).

Deaths due to COVID-19 by Autonomous Communities and Cities

The highest gross death rates from *COVID-19, virus identified* per 100,000 inhabitants during the months of March to May 2020 corresponded to Castilla-La Mancha (160.8), Comunidad de Madrid (150.6) and Castilla y León (125.1).

In turn, the lowest gross death rates were in the Autonomous Cities of Melilla (2.3) and Ceuta (6.0), and in Canarias (7.5).

Castilla-La Mancha (78.7), Castilla y León (71.1) and Comunidad de Madrid (66.5) also registered the highest gross death rates from *COVID-19, virus suspected*.

The lowest gross rates were recorded in the Autonomous City of Melilla (1.1 deaths per 100,000 inhabitants), Región de Murcia (1.7) and the autonomous city of Ceuta (2.4).

		Covid-19 virus identified		Covid-19 suspected		
	All deaths March- May 2020	Deaths	Crude rate	Deaths	Crude rate	
TOTAL	152,230	32,652	68.8	13,032	27.5	
Andalucía	19,135	1,400	16.5	540	6.4	
Aragón	4,432	922	69.4	223	16.8	
Asturias, Principado de	3,713	341	33.5	180	17.7	
Balears, Illes	2,172	217	18.5	31	2.6	
Canarias	4,100	163	7.5	76	3.5	
Cantabria	1,763	215	36.9	63	10.8	
Castilla y León	11,881	2,995	125.1	1,702	71.1	
Castilla-La Mancha	10,216	3,288	160.8	1,609	78.7	
Cataluña	27,734	8,003	102.9	2,751	35.4	
Comunitat Valenciana	12,735	1,255	24.8	512	10.1	
Extremadura	3,681	512	48.1	250	23.5	
Galicia	8,298	643	23.8	76	2.8	
Madrid, Comunidad de	28,847	10,210	150.6	4,508	66.5	
Murcia, Región de	2,993	140	9.3	26	1.7	
Navarra, Comunidad Foral de	2,111	567	85.8	161	24.4	
País Vasco	6,982	1,429	64.4	258	11.6	
Rioja, La	1,164	345	107.9	63	19.7	
Ceuta	145	5	6.0	2	2.4	
Melilla	128	2	2.3	1	1.1	

Gross mortality rates due to COVID-19 by Autonomous Communities and Cities Absolute data and rates per 100,000 inhabitants

In all Autonomous communities and cities, the highest number of deaths from *COVID-19, virus identified* occurred in hospitals. The highest percentages were registered in the autonomous cities of Ceuta and Melilla (100%) and in Illes Balears (94.3%).

On the other hand, the lowest percentages were registered in Comunidad Foral de Navarra (59.3%), Región de Murcia (61.9%) and La Rioja (66.4%). These three Autonomous Communities, together with País Vasco, had the highest percentages of deaths in retirement and nursing homes from *COVID-19, virus identified*.

In the majority of Autonomous Communities and Cities, deaths from *COVID-19*, *virus suspected* took place in retirement and nursing homes and in private homes.

The largest percentages of deaths in nursing homes were recorded in Comunidad Foral de Navarra (67.5%), Comunidad de Madrid (64.9%) and Castilla-La Mancha (60.1%).

On the other hand, the highest percentages of deaths in private homes from *COVID-19, virus suspected* took place in the Autonomous City of Ceuta (50.0%), Illes Balears (41.9%) and Región de Murcia (34.6%).

Main causes of death by place where the death occurred

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During the months of January to May 2020, the number of deaths in nursing homes increased by 72.5% compared to the same period of the previous year (a total of 18,036 more). It increased by 21.3% (10,014 more) in private homes, and by 18.3% (18,917 more) in hospital centres.

These increases were more pronounced during the months of March to May 2020 (136.9%, 39.2% and 33.0%, respectively).

The main causes of deaths that occurred in hospitals in the first five months of 2020, by disease groups, were infectious diseases - which includes *COVID-19* - with 24.9% of the total, followed by tumours (23, 5%) and diseases of the circulatory system (18.7%). Deaths due to diseases of the respiratory system represented 11.8%.

On the other hand, deaths in hospital centres due to *tumours*, *diseases of the circulatory system* and *diseases of the respiratory system* fell by 7.1%, 7.8% and 14.8%, respectively.

In nursing homes, *infectious diseases* were also the main cause of death (32.7% of deaths), followed by *diseases of the circulatory system* and the *nervous system* (20.7% and 10.0% of the total, respectively). The group of *mental disorders*, which mainly includes *dementia*, ranked fourth, with 8.3% of deaths.

For the first five months of 2019, we should highlight the increases in deaths in nursing homes due to *diseases of the nervous system* (25.7% more), *mental and behavioural disorders* (17.8% more) and *diseases of the circulatory system* (15.8% more).

Main causes of death by ICD-10 chapters and place of occurrence

Percentage variation January-May 2020/2019



In private homes, the first cause of death was *diseases of the circulatory system*, with 33.0% of all deaths that took place at home, and an increase of 10.6% compared to the January-May 2019 period.

Tumours (25.0% of the total and an increase of 28.6%) and *diseases of the respiratory system* (8.1% of the total and an increase of 13.6%) came afterwards.

External causes

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During the January to May 2020 period, there were 5,850 deaths from *external causes*, or 698 less than during the same period the previous year (10.7% less). By sex, 3,556 men (13.2% less) and 2,294 women (6.4% less) died from these causes.

At a more detailed level, the number of deaths from *external causes* during the months of January and February 2020 fell by 0.7% compared to January and February 2019 (19 less). By sex, the decrease was 1.0% in the case of men, and 0.2% in women.

For its part, in the period from March to May 2020, the number of deaths from *external causes* decreased by 17.8% compared to the same period of the previous year (679 fewer deaths). For men the decrease was 21.7% and for women 10.9%.

Suicide remained the leading cause of external death during the first five months of 2020. There were 1,343 deaths In this category, 8.8% less than in the same period of the previous year.

It was followed by *accidental falls* (with 1,300 deaths and an decrease of 1.9%) and *accidental drowning, submersion and suffocation* (with 1,183 deaths, or 9.6% less).

It should be noted that 432 people died from *traffic accidents*, which was 41.0% less than in the first five months of 2019.

By sex, the main causes of external death in men were *suicide* (with 983 deaths) and *accidental falls* (680). In women they were *drowning, submersion and suffocation* (630) and *accidental falls* (620 deaths).

Main causes of external death

Percentage variation January-May 2020/2019



Mortality rates of the main causes by Autonomous Communities and Cities

In terms of the main causes of death, the highest crude mortality rates from *diseases of the circulatory system* were recorded in Principado de Asturias (165.1 deaths per 100,000 inhabitants), Galicia (156.1) and Castilla y León (150.0).

The highest death rates from *tumours* also occurred in Principado de Asturias (146.7 deaths per 100,000 inhabitants), Galicia (131.9) and Castilla y León (130.8).

Diseases of the respiratory system had the highest death rates in Principado de Asturias (71.9), Extremadura (68.6) and Castilla-La Mancha (67.8).

Gross mortality rates of the main causes of death, by Autonomous Communities and Cities³. January - May 2020

Rate per 100,000 inhabitants

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	Circulatory System	Infectious diseases	Neoplasm	Respiratory System	Nervous system	Mental disorders
TOTAL	112.2	102.0	99.6	48.9	26.1	20.5
Andalucía	118.7	28.7	89.4	40.7	22.0	12.1
Aragón	130.6	92.6	108.5	60.3	32.3	28.2
Asturias, Principado de	165.1	59.5	146.7	71.9	30.1	31.6
Balears, Illes	79.3	26.2	80.9	31.5	21.3	13.6
Canarias	95.0	16.6	91.3	45.2	15.2	12.5
Cantabria	128.0	56.6	116.5	54.0	30.0	33.1
Castilla y León	150.0	203.9	130.8	63.4	31.4	24.9
Castilla-La Mancha	123.3	245.3	94.0	67.8	23.8	21.7
Cataluña	98.9	143.8	93.5	44.5	28.7	22.6
Comunitat Valenciana	110.5	40.6	102.1	41.9	30.2	14.6
Extremadura	137.9	77.7	116.7	68.6	27.6	26.0
Galicia	156.1	32.2	131.9	61.3	28.7	40.7
Madrid, Comunidad de	87.2	222.1	84.9	54.1	23.0	18.0
Murcia, Región de	99.9	15.7	81.0	41.9	28.0	14.0
Navarra, Comunidad Foral de	92.3	114.5	111.7	42.4	37.5	20.3
País Vasco	107.5	81.0	118.4	39.7	28.1	35.1
Rioja, La	114.8	134.2	119.2	39.1	27.8	27.8
Ceuta	102.6	26.2	66.8	47.7	21.5	10.7
Melilla	78.1	10.3	47.1	41.3	21.8	4.6

Data Review and Update

The data published today are provisional and will be released as definitive during the year 2021. In addition, they are consistent with the results offered for the same period in the experimental statistic, *Estimation of the number of weekly deaths during the COVID-19 outbreak*. All results are available on INEBase.

³ The data refer to the community and/or autonomous city in which the death occurred.

Methodological note

The methodology used by the INE in the statistics of deaths by cause of death is based on a detailed analysis of the medical death certificates filled out by doctors at the time of death, as well as the implementation of two international standards; firstly, the current international classification of diseases (ICD, currently version 10, ICD-10) agreed upon under the framework of the United Nations and within the World Health Organization (WHO); and secondly, the standards adopted by the WHO itself, which determine the different causes of death, their comorbidities, complications, etc.

More precisely, the Death Statistics by cause of death is based on the 10th Revision of the International Classification of Diseases (ICD-10) of the World Health Organization (WHO). The determination of the disease that causes death among those reported in the CMD is governed by the rules established by the WHO in volume 2 of the ICD-10. This cause is called the root cause.

In the case of those who died in the first 24 hours of life, the information from the CMD is complemented by that of the Statistical Birth Bulletin (SBB). The source of information for deaths with legal intervention is the Statistical Legal Death Bulletin completed by the courts or the information directly provided by the Institutes of Legal Medicine and Forensic Sciences (IMLCF). In both cases, the information is provided through a web application designed by the INE.

Furthermore, within the European Union, this Statistic is mandatory for the Member States. It is regulated by Regulation (EC) no. 1338/2008 of the European Parliament and of the Council, of December 16, 2008, on community statistics on public health and health and safety at work, and it is subsequently developed by Regulation (EU) no. 328/2011 of the Commission, of April 5, 2011 with regard to statistics on causes of death.

To interpret the information on deaths related to *COVID-19* in this Statistic, it is important to understand that the section of the medical death certificate in which the doctor reports the causes of death consists of two parts.

- Part 1 contains the chain of events (diseases or complications) leading to death, starting from the initial or fundamental cause: that is, the cause that initiates said chain of events and is therefore the direct trigger for death.
- Part 2 includes other diseases that, while not being a direct cause of death, did contribute to it. These are generally the comorbidities of the deceased person.

When a new disease arises, the WHO assigns it an ICD-10 emergency code. In the case of *COVID-19*, the WHO established the ICD-10 emergency code "U07.1 COVID-19, virus identified" and "U07.2 COVID-19, virus suspected".

Both codes have been used to code *COVID-19* as a cause of death. The WHO guideline is to code *COVID-19* as U07.1, except in cases where doctors have indicated the terms "probable" or "possible" in the certificate, in which case it should be coded with U07.2.

The Death Statistics by cause of death is an annual operation. However, the exceptional situation caused by the pandemic and the need for detailed information on the causes of death

has led to the modification of the INE's publication calendar. A preview of information is thus offered for the months of January to May 2020, as well as the same period of the year 2019.

For more information the methodology can be accessed at:

https://www.ine.es/en/daco/daco42/sanitarias/metodologia 00 en.pdf

The standardized methodological report is at:

https://www.ine.es/dynt3/metadatos/en/RespuestaDatos.html?oe=30417

INE statistics are produced in accordance with the Code of Good Practice for European Statistics, which is the basis for the institution's quality policy and strategy. For more information, please see the <u>Calidad en el INE y Código de Buenas Prácticas Quality at INE</u> and the Code of Good Practices on the INE website.

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