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Approximately 7% of all deaths in 2020 due to COVID-19

Vienna, 2021-02-26 – In 2020, a total of 90 517 people died in Austria, including 6 477 people or 7.2% from COVID-19, according to preliminary results from Statistics Austria.

"The higher mortality in 2020 is undoubtedly due to the Corona pandemic: In the previous year, 7 131 more people died in Austria than in 2019; 6 477 of them from COVID-19. Overall, every 14th death in 2020 was due to COVID-19. At the peak of the second Corona wave, COVID mortality even exceeded mortality due to cardiovascular diseases, which were responsible for by far the most deaths in recent years", says Statistics Austria Director General Tobias Thomas.

9% more deaths than in the previous year, one in 14 deaths due to COVID-19

According to preliminary results, a total of 90 517 people died in 2020, 8.6% or 7 131 more than in the previous year (2019: 83 386 deceased), this amount is roughly equivalent to the number of deaths in an average month.

However, taking into account population growth and changes in the age structure, a slight increase in deaths would have been expected in 2020 even without the COVID-19 pandemic. As part of the population forecast prepared by Statistics Austria in fall 2019 – before the start of the COVID-19 pandemic – a total of 85 075 deaths were projected for 2020. This number has been exceeded by 5 442 deaths, or 6.4%.

As expected, these additional deaths were caused by COVID-19. A total of 6 477 persons died due to COVID-19, thus one in 14 deaths (7.2%) in 2020 can be attributed to this cause of death, with men (7.6%) being slightly more likely to die from COVID-19 than women (6.7%).

Deaths due to COVID-19 occurred primarily at older ages: 97% of those affected were older than 60 years. Overall, COVID-19 was the determining cause of death in 8.4% of all decedents aged 80 years and older, but in only 0.9% of decedents younger than 40 years.

Significant differences were also evident at the level of the provinces: A particularly large number of deaths were attributable to COVID-19 in Carinthia (9.4%), Tyrol (8.8%), and Styria (8.4%). In Lower Austria (5.1%), Burgenland (5.4%) and Vienna (6.4%), on the other hand, the proportion of deaths due to COVID-19 was somewhat lower.

While about 48% of all deaths occurred in a hospital, the proportion of hospital deaths among COVID-19 deaths was significantly higher, at about 73%.

Increase in deaths from kidney diseases, decrease in deaths from influenza

Comparing the causes of death in 2020 with those in 2019, there is a striking increase of around 24% in diseases of the kidney and urogenital system, from 1 848 deaths in 2019 to 2 294 deaths in 2020. The average for the last five years (2015 to 2019) is exceeded by as much as 29.2% in 2020.

The most significant decrease of -16.7% occurred in deaths caused by influenza and pneumonia. In 2020, a total of 1 201 people died from these causes, compared to 1 441 in 2019. Compared to the average of the last five years, there was an 11% decrease in this cause of death in 2020.

The numbers of deaths from most other causes of death, on the other hand, showed an unremarkable trend, with only minor changes compared with the previous year. There were slight increases, for example, in leukaemia, Parkinson's disease and fatal accidents due to falls. On the other hand, the number of suicides declined. In 2020, a total of 1 068 suicides were registered, 45 or

4.0% fewer than a year earlier (2019: 1 113 suicides). Compared to the average of the last five years, the decrease in suicides was even more significant (-11%).

Suicide mortality unremarkable throughout 2020, as is cardiovascular mortality

Looking at the cause-of-death-specific age-standardized mortality rates for each calendar week, the two prominent COVID-19 waves stand out clearly, with much lower mortality during the first wave in the spring than during the second wave in the fall. At the peak of the second wave in the 47th to 49th calendar weeks (16 November to 6 December 2020), mortality due to COVID-19 was actually higher than mortality due to cardiovascular disease. Except for COVID-19, mortality from the leading causes of death for 2020 showed no abnormalities over time; this was also true for suicide and cardiovascular disease.

Those who died from COVID-19 suffered primarily from hypertension, kidney disease, and diabetes

Among those who died of COVID-19 in 2020, nearly three-tenths also suffered from hypertension; this was the most common comorbidity. About one-fifth also had kidney disease. About 18% of those who died of COVID-19 also had diabetes, ischemic heart disease, or dementia, about 10% had chronic respiratory disease, and about as many had cancer. Strokes, diseases of the digestive organs, obesity and pulmonary embolism were also frequently mentioned as concomitant diseases.

COVID-19 as a frequent concomitant disease in dementia and cancer

In addition to those who died from COVID-19, cause-of-death statistics for 2020 show 1 382 individuals with COVID-19 as a concomitant disease. Pre-existing serious underlying conditions may have been worsened by this to the point that it ultimately led to death. The most common underlying diseases of these individuals were dementia (Alzheimer's, Parkinson's) or kidney disease (each accounting for around 4% of those who died from these diseases), as well as various cancers.

For more detailed information regarding [Causes of Death](#) please refer to our Website. Further information on [deaths](#) can be found on our website, where an interactive web application – [the Atlas of Deaths](#) – also graphically illustrates the development and regional distribution. Detailed results can be found in Statistics Austria's [open data repository](#).

Information on methodology, definitions: This analysis takes into account all deaths occurring in Austria in 2020 that were registered by the civil registries. All data are preliminary data, including medical information and its coding.

The **legal basis** for determining the cause of death is the "Personenstandsgesetz 2013" (PStG 2013: Federal Law No. 16/2013; § 28 para. 1). Accordingly, Statistics Austria has to receive and process information on the cause of death. Causes of death statistics are based on **death certificates**, with a structure according to the World Health Organisation. The death certificate is filled in by a medical examiner, pathologist or forensic pathologist. On the death certificate is indicated the causal chain of illnesses that ultimately led to death. From these, the disease that triggered the death process (the **underlying cause**) is selected and coded according to international guidelines (the International Classification of Causes of Diseases – ICD-10). An example would be a COVID-19 disease with the sequelae pneumonia or viral myocarditis. In addition, the physician can also specify **accompanying diseases** that contributed to the death process. Examples would be diabetes or high blood pressure. Death certificates are sent to the civil registries for certifying the death. Certified cases are forwarded to Statistics Austria, where they are pre-sorted, entered, coded and evaluated. Extensive pathophysiological knowledge is necessary for the coding of the deaths.

Since only **diagnoses** and no laboratory results are indicated on the death certificate, data of the cause of death statistics were enriched with the results from the Epidemiological Reporting System (EMS) of the Federal Ministry of Social Affairs, Health, Care and Consumer Protection. For the majority of cases, the medical information was consistent. Cases for which no information on laboratory evidence and disease or death caused by SARS-CoV-2 was available in the cause of death statistics at the time of data transmission (e.g. due to a delay in reporting or pending cause of death coding), but who – according to EMS – had died of COVID-19, were assigned the ICD-Code U07.1 (COVID-19, virus identified).

Not every confirmed COVID-19 case may be coded in the cause of death statistics with underlying disease COVID-19. For example, for advanced metastatic cancer, COVID-19 is classified as a disease that accelerates the death process (comorbidity). This means, that despite a laboratory confirmation from the EMS, COVID-19 may not have been coded as underlying cause.

Cause of death statistics is published by the **place of residence of decedents**, which may also result in differences to the EMS. Data there is published according to the place of the responsible regional administrative authority; yet, the authority's responsibility is based on the actual place of stay of the infected person; this characteristic can therefore change several times during case processing (for example, due to admission or transfer to a hospital).

The total number of deaths in a year depends on the **size and age structure of the population**. **Mortality** is usually described using **age-standardised death rates**. The standardised death rate indicates how many deaths would have occurred per 100 000 living persons due to the prevailing mortality conditions if the age structure of the population in the relevant reporting period (here at the beginning of the year, provisional figures in 2020) had corresponded to that of a standard population. This eliminates the disturbing influence of the respective age structure, i.e. this measure takes into account both the overall growing population and its continuous ageing, thus making different death conditions comparable over time. The **standard population** used is the standard population 2013 published by Eurostat, which is an "artificial population" with an estimated age structure for the European population used as a basis for calculating comparable age-standardised death rates.

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