

## Factsheet

# „COVID-19 in Austria – incidence, mortality and vaccination versus socio-economic aspects”

Due to data protection restrictions data collection on incidence, health outcomes and vaccination by socio-economic groups is very limited in Austria. This also applies to all aspects of the COVID-19 pandemic. So, for the time being the only possibility to analyse socio-economic factors of the pandemic is to compare socio-economic types of regions regarding the above-mentioned aspects (i.e. comparing the most deprived geographical areas to the least deprived areas). Indicators used for the analysis:

### Regional aspects of the COVID-19 pandemic

- » COVID-19-**Incidence** (cumulative confirmed cases per 100 000 population in the period 01.01.2020 to 30.06.2021; age-standardized incidence rate, employing the European standard population 2013)<sup>1</sup>
- » COVID-19-**Mortality** (cumulative number of deaths per 100 000 population in the period 01.01.2020 to 31.12.2020; age-standardized incidence rate, employing the European standard population 2013)<sup>2</sup>
- » COVID-19-**Vaccination** (cumulative uptake of at least one vaccine dose per 100 population in the period 01.01.2021 to 30.06.2021; age-standardized rate, employing European standard population 2013)<sup>3</sup>

### Regional aspects of socio-economic conditions

- » Average **educational** level (high school graduates and academics, % of population aged 15 year and more)<sup>4</sup>
- » Average per capita **income** per year in the period 2013 to 2017 (in €)<sup>5</sup>

Although regional correlations provide only a basis for testing of hypothesis (but not for statistical evidence) they are used to shortly describe the findings via comparing the 116 districts of Austria and especially for the 23 districts within the capital of Vienna (cf. table on the next page).

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1

Data Source: Ministry of Social Affairs, Health, Care and Consumer Protection – Epidemiological Reporting System 2020/2021

2

Data Source: Statistics Austria – Causes of Death Statistics 2020

3

Data Source: Ministry of Social Affairs, Health, Care and Consumer Protection – Vaccination Certificate Register 2021

4

Data Source: Statistics Austria – Educational Level Register 2019

5

Data Source: Statistics Austria – Integrated statistics of wage and income tax 2013–2017  
Stand: September 2021

Region	Explained	Explaining	N	r	95 % CI	p
Austria (N=116)	Incidence_A	Education_A	116	-0,365	(-0,513; -0,195)	0,000
	Incidence_A	Income_A	116	-0,410	(-0,551; -0,246)	0,000
	Mortality_A	Education_A	116	-0,234	(-0,399; -0,054)	0,011
	Mortality_A	Income_A	116	-0,275	(-0,435; -0,097)	0,003
	Vaccination_A	Education_A	116	0,292	(0,116; 0,450)	0,001
	Vaccination_A	Income_A	116	0,482	(0,329; 0,611)	0,000
Vienna (N=23)	Incidence_V	Education_V	23	-0,785	(-0,904; -0,551)	0,000
	Incidence_V	Income_V	23	-0,675	(-0,851; -0,364)	0,000
	Mortality_V	Education_V	23	-0,447	(-0,726; -0,043)	0,032
	Mortality_V	Income_V	23	-0,477	(-0,743; -0,081)	0,021
	Vaccination_V	Education_V	23	0,781	(0,543; 0,902)	0,000
	Vaccination_V	Income_V	23	0,774	(0,532; 0,899)	0,000

The main findings based on such kind of analysis during 1,5 years of the pandemic all over **Austria** can be summarized as follows: The comparison of COVID-19 **incidence** according to geographical area (116 districts in Austria) showed that in the first weeks of the pandemic districts with higher socioeconomic status had a higher rate of cases. But this situation changed significantly – in the further run of the pandemic the cumulative rate was consistently higher in districts with lower socioeconomic status. The same is true for cumulative COVID-19 **mortality** in 2020, but on less significant level. On the other hand, the cumulative uptake of at least one **vaccine** dose (% population) until mid of 2021 increased with the socioeconomic status of the region (cf. table above, section “Austria”).

Focusing only the 23 districts within the capital of **Vienna** leads to the same conclusions, but on a much higher level of significance (cf. table above, section “Vienna”, as well as map and figures on the next page).

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COVID-19 incidence 2020/2021 (cumulative)

Confirmed cases per 100 000 population (01/2020 to 06/2021):

