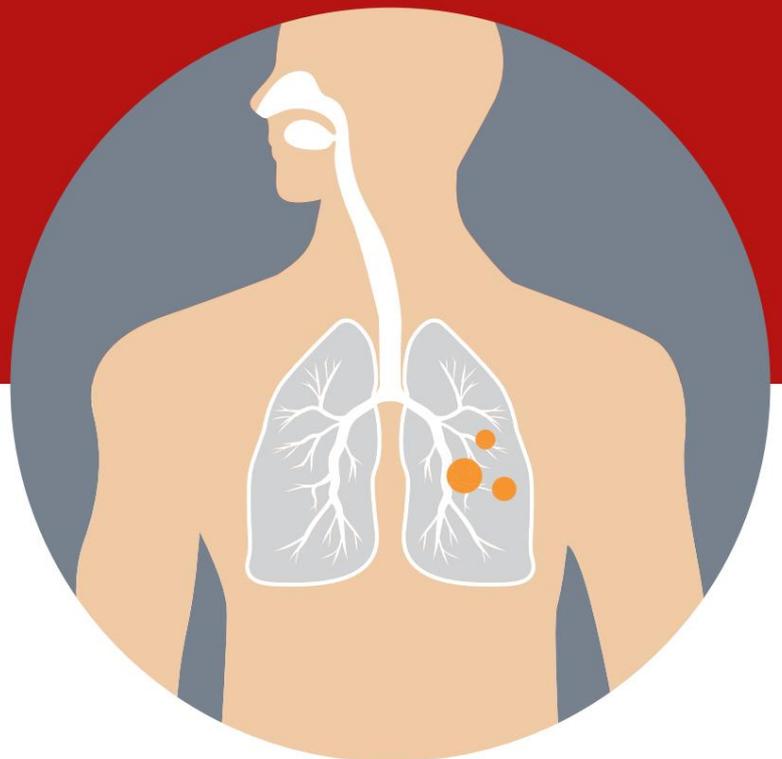


Weekly trends: covid-19 and other respiratory infections

Week 11 | 2022





The epidemiological development of covid-19 and other respiratory infections in Denmark from week 9 to week 10

Prepared March 15, 2022

Published March 17, 2022



Table of Contents

Overall assessment	3
Summary	4
Overall assessment	7
Key figures	8
Covid-19	8
Other respiratory diseases	9
Trends - covid-19	10
Growth rates in the municipalities	11
Age incidence	14
Newly admitted	15
SARS-CoV-2 variants	20
Mortality	22
Hospital outbreak	26
Nursing homes	26
Special staff groups	27
Wastewater	28
Presumably infected with covid-19 and symptoms	30
Data basis	32
Covid-19	32
Links	37



Overall assessment

Please note that The Danish Health Authority on Thursday of week 10 changed their test recommendations for COVID-19. Testing is only recommended for those at risk of serious disease and for those where it is clinically relevant based on a medical assessment. The data for this report is thus expected to change as the new recommendations are implemented. In general, it is expected that a substantially smaller proportion of infections will be registered than before and that data will primarily reflect infections among vulnerable groups and among patients admitted to hospital. All comparison with data before week 10 should be interpreted with caution and for the same reason some data will be omitted from next week's report.

Case numbers continue to decrease from week 9 to 10, which should be interpreted in light of the changed test activity. Parallel to the fall in case numbers, a fall in the positive percentage is also seen in all 5 regions. Test activity is steadily decreasing and has fallen to an average under 50,000 daily PCR tests in week 10. The fall in case numbers is supported by a continued decrease in the concentration of SARS-CoV-2 in waste water samplings across the county in week 10 .

Case numbers are declining in all age groups and the highest incidence in week 10 was among the 50-69 year olds. The number of new hospitalizations declined by 19% in week 10 and that decline is seen in all age groups. The number of admissions to intensive care units has also declined, and there is a trend towards stabilization in the proportion receiving covid-specific treatment.

The proportion of patients admitted because of a covid-19 diagnosis has decreased to 48% in week 8. Among the older age groups above 60 years of age this proportion is still higher: 60% in week 8. The number of covid-related deaths has declined from week 9 to 10. In week 10 there was also a decrease in the proportion of covid-related deaths that were not estimated to have occurred as a result of covid-19. However, there are still signs of a low excess mortality, especially among those older than 85 years of age.

As case numbers continue to decline, it is expected that the proportion of both covid related hospitalizations and deaths not caused by covid-19 begin to drop. This tendency is expected to continue as the new test recommendations are implemented in the coming weeks.

There are still signs of rising numbers of flu cases and a delayed flu season.

A small rise in test activity is seen in parallel to an increase in positive percentage. There is also a rise in hospital admissions with a positive test for influenza.

Overall, infections with SARS-CoV-2 are expected to continue declining across the country in the coming weeks. As case numbers among the older age groups decline, the expected number of related covid-19-hospitalizations and deaths are also expected to decline. As SARS-CoV-2 infections have declined over the last 3 weeks, rising numbers of influenza cases are seen late in the influenza season.



Summary

It should be noted that the National Board of Health on Thursday in week 10 has changed their test recommendations, and that tests are now only recommended for vulnerable people at risk of serious illness and in people where it is clinically relevant after a medical assessment. The data basis for the trend report is therefore expected to change as the new recommendations are implemented. In general, it must be expected that a significantly smaller proportion of cases of infection than before will be registered, and that the data base in future will primarily reflect the infection in the group of vulnerable and among hospitalized patients. Therefore, reservations must be made when comparing in relation to data before week 10, and for the same reason, parts of the report's content will be phased out in next week's report.

- The number of new cases with covid-19 has decreased between week 9 and week 10, corresponding to the incidence in week 10 being 1,376 cases per 100,000 inhabitants. The positive percentage was 34.5% in week 9 and 31.3% in week 10. The number of PCR tests has decreased from week 9 to week 10 corresponding to 18%.
- The incidence is highest in the Region of Southern Denmark (1,637 per 100,000 inhabitants), and declining incidences are seen in all five regions from week 9 to week 10.
- The positive percentage is highest in the Central Jutland Region (35.0%), and there is a decline positive percentages in all five regions from week 9 to week 10.
- At the national level, the incidence remains highest among the 60-69-year-olds (1,840 per 100,000 inhabitants) and the 50-59-year-olds (1,791 per 100,000 inhabitants). There is still a decline in all age groups.
- The number of new admissions related to covid-19 has decreased to 1,748 in week 10, and there is a decrease in all age groups from week 9 to week 10. The 70-79-year-olds are still the age group that constitutes the largest group among the newly admitted, followed by the 80-89-year-olds and the 60-69-year-olds.
- The proportion of admissions among persons admitted due to a covid-19 diagnosis (as opposed to *with* a covid-19 diagnosis) has fallen from 52% in week 7 to 48% in week 8. In week 8, the proportion admitted with a covid-19 diagnosis 33% for the 0-59 year olds and 60% for the 60+ year olds.
- Data from the Danish covid-19 intensive care database show that the number of patients admitted to the intensive care unit is declining, however, reservations must be made for ongoing post-registrations. In parallel with the decrease in the number, a stabilization is seen in the proportion of patients receiving intensive covid-19 treatment in intensive care, which in week 10 was 63%. Link: [Danish Intensive Database](#).



- The number of covid-19-related deaths has dropped from 292 in week 9 to 254 in week 10.
- There is still a low excess mortality rate in Denmark, especially among the elderly aged 85+. However, the mortality rates of recent weeks must be taken with reservations due to post-registration.
- At week 10, there is a 37% stabilization in the proportion of deaths with a positive SARS CoV-2 test within 30 days that is estimated to have occurred for a reason other than covid-19. The proportion is estimated on the basis of probability calculations.
- In the inventory of validated causes of death for the entire pandemic, it is seen that the proportion of deaths with covid-19 (and not due to covid-19) has increased as the high level of societal infection causes the omicron variant. In week 10, deaths that have occurred for a cause other than covid-19 account for about 46% of covid-19-related deaths where there is a validated cause of death. However, it must be taken into account that there is a large degree of ongoing post-registration of death certificates and that there is still a lack of validation corresponding to 36% in week 10.
- Infection among nursing home residents has decreased from 1,700 cases in week 9 to 1,288 in week 10. There were 109 deaths among residents with covid-19 in nursing homes in week 10 compared to 116 in week 9.
- Infection among employees in the health, social and education sectors continues to decline from week 9 to week 10.
- The share of BA.2 out of all cases has again increased slightly to approx. 99% of all cases in week 10 compared to 98% in week 8. A stable to slightly increasing proportion of BA.2 cases are BA.2 with the mutation H78Y. It should be noted that the latest figures of variants for week 10 should be interpreted with reservations, as the number of sequences is still low.
- In week 10, a decrease in SARS-CoV-2 concentration in the wastewater is seen at the national level. Divided into regions, there is also a decrease in SARS-CoV-2 concentration in the wastewater in all regions.
- The proportion of COVID-meter user panel who are suspected of being infected with covid-19 in week 10 is 1.8%, which is on a par with week 9. The most common symptoms reported in week 10 were runny or stuffy nose (7, 6%), more tired, debilitated or exhausted (7.3%) and headache (7.2%).
- In a collaboration between SSI and the Danish blood banks, donor blood for anti-nucleocapsid IgG antibodies against SARS-CoV-2 infection is examined. This sero prevalence is compared with the cumulative PCR incidence from covid-19 monitoring. The monitoring runs every two weeks and the results can be found



here: [Dark numbers for covid-19](#) . By week 9, 51% (95% CI 48-56%) of the blood donors had formed antibodies. If this is projected to 8 March and to the entire population between 17 and 72 years of age, it is estimated that 70% (95% CI 63-77%) have been infected in the period 1 November 2021 - 8 March 2022. It should be noted that that this calculation is based on a number of reservations.

- In week 10, there is still an increase in the number of infected and the number of new patients with influenza, especially in the Capital Region, Region Zealand and the Region of Southern Denmark. This is Influenza A. There is an increase in influenza activity late in the flu season.



Overall assessment

The infection continues to fall between week 9 and week 10, which should be seen in the light of the changed test activity. In parallel with the decrease in the number of new cases, there has also been a decrease in the positive percentage, which can also be seen in all 5 regions. The test activity is steadily declining, falling to below an average of 50,000 PCR tests daily in week 10. The decrease in the number of new cases is supported by a continued decrease in the concentration of SARS-CoV-2 in the wastewater across the country in week 10.

The infection decreases in all age groups, and the highest infection was in week 10 among the 50-69 year olds. There is a decrease in the number of new admissions of 19% in week 10, and the decrease occurs across all age groups. There is a decrease in the number of inpatients in intensive care, and there is a tendency for a stabilization in the proportion in intensive care who receive covid-specific treatment.

In week 8, the proportion of patients admitted due to a covid-19 diagnosis had dropped to 48%, and a higher proportion is still seen among the older age groups over 60 years, corresponding to 60% in week 8. The number of covid-related deaths have decreased in week 10 compared to week 9. For week 10 there is a decrease in the proportion of covid-related deaths that is estimated to occur for a reason other than covid-19, however, there are still signs of a low overall excess mortality, especially among the elderly over 85 years.

As the infection in the community decreases, the proportion of both covid-related is expected hospitalizations and deaths that occur for a reason other than covid-19 begin to decrease. This trend is expected to continue as the new test recommendations are implemented in the coming weeks.

There are still signs of an increasing incidence of influenza, and signs of a delayed flu season. There is a slight increase in test activity, and at the same time an increase in the positive percentage is seen. There is also an increase in inpatients with a positive flu test.

Overall, SARS-CoV-2 infection is expected to continue to decline further across the country in the coming weeks. As the number of new cases among the older age groups decreases, the number of derived covid-19-related admissions and deaths is also expected to decrease. In line with the declining infection with SARS-CoV-2, there has been an increase in influenza activity in the last 3 weeks late in the flu season.

At the end of this report, the data basis is described.



key figures

Covid-19

Table 1. COVID-19: Key numbers and trends, weekly, 2022

Table 1. Covid-19: Key figures and trends, broken down by week, 2022

Covid-19	2022						Trend week 5-10
	5	6	7	8	9	10	
Incidence pr. 100,000 inhabitants * 5,061		5,395	4,081	2,288	1,889	1,376	
R (newly infected)	1.0	0.9	0.9	0.7	0.8	0.7	
Number of tests performed (PCR)	1,088,298	1,023,574	766,439	546,574	415,952	339,591	
Confirmed cases (PCR)	296,630	316,181	239,265	152,217	110,778	80,651	
Positive Percentage (PCR)	35.4	39.8	40.1	35.8	34.5	31.3	
Number of tests performed (antigen)	819,679	641,090	343,289	227,407	145,760		
Confirmed cases (antigen, PCR confirmed) **	47,100	48,378	30,993	18,395	12,055	-	
Positive percentage (antigen)	5.8	7.5	9.0	8.1	8.3	-	

Notes to table: The contact number (R) and the positive percentage in this table are calculated solely on the basis of PCR tests from the public sector.

* The population for calculating incidences is described in the data base under the section "Populations for calculating incidence".

** Includes only individuals who have a confirmatory positive PCR test. It is not possible to calculate for the current week, as data is calculated with a three-day delay.

Table 2. COVID-19: Key numbers and trends for hospital admissions and deaths, weekly, 2022

Table 2. Covid-19: Key figures and trends for hospitalized and dead, by week, 2022

Covid-19	2022						Trend week 5-10
	5	6	7	8	9	10	
New hospital admissions	2,391	2,774	2,888	2,348	2,169	1,788	
Proportion of new hospital admissions with expected full effect after 2. piece (%)	19.2	18.0	13.9	12.6	10.7	9.6	
Proportion of new hospital admissions with expected full effect after 3rd plug (%)	48.2	53.6	60.1	66.1	68.7	72.4	
New hospital admissions per. 100.000 unvaccinated * (+ 12-years old)	8.9	9.2	8.2	7.3	6.2	6.0	
New hospital admissions per. 100.000 with expected full effect after 2nd plug * (+ 12-year-olds)	4.8	6.2	5.7	5.2	4.1	3.3	
New hospital admissions per. 100.000 with expected full effect after 3rd plug * (+ 12-year-olds)	3.7	4.7	5.4	5.5	5.1	4.6	
Number admitted on Monday morning	1,287	1,465	1,778	1,751	1,688	1,387	
Number admitted to intensive care on Monday morning	3.1	2.5	4.4	4.2	3.7	2.6	
Number of dead **	145	209	224	275	292	254	

* The population for calculating incidences is described in the data base under the section "Populations for calculating incidence".

** The number of deaths is updated retrospectively as data may be delayed due to post-registration.



Other respiratory diseases

Data is updated backwards.

Follow the development of influenza on SSI's [influenza dashboard](#).

Table 3. Influenza: Key numbers and trends, weekly, 2022

Table 3. Influenza: key figures and trends *, broken down by week, 2022

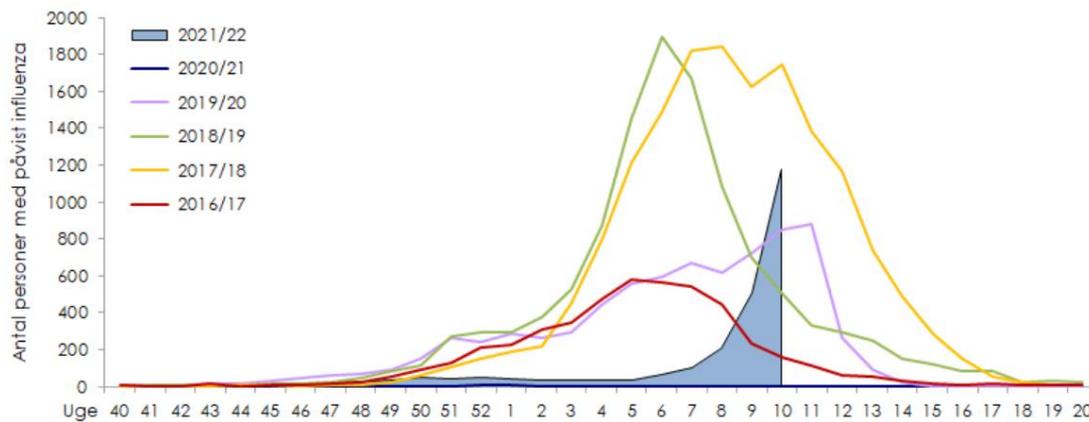
Flu	2022 week						Trend week 5-10
	5	6	7	8	9	10	
Incidence pr. 100,000 inhabitants	0.6	1.1	1.7	3.5	8.6	20.1	
Number of people tested	7,050	6,622	6,418	6,228	6,247	8,355	
Positive percentage	0.5	1.0	1.6	3.3	8.1	14.1	
Number of new admissions	6	9	28	36	81	215	

* Children between 2 and 6 years of age who have received the live attenuated vaccine and who test positive for influenza A or B within 14 days after vaccination, do not count as positive influenza cases.

Figure 1. Influenza: Laboratory confirmed influenza this season compared to the last five seasons, 2016-2022

Figure 1. Influenza: Laboratory-proven influenza this season compared to the previous five seasons, 2016-2022

Laboratoriepåvist influenza i denne sæson sammenholdt med de fem forrige sæsoner





Trends - covid-19

This section shows more detailed graphs and tables to illustrate the evolution of covid 19 over the past six weeks.

For other respiratory infections, refer to [SSI's website](#) under disease surveillance.

Regional differences

Table 4. COVID-19: Key numbers and trends by region, weekly, 2022

Table 4. Covid-19: Key figures and trends for regions, by week, 2022

Covid-19	Region	2022 week						Trend week
		5	6	7	8	9	10	5-10
Incidence pr. 100,000 inhabitants	The capital	4070	3,795	2,889	1,910	1,396	1,044 <small>pr. most common</small>	
	Central Jutland	6054	6,567	4,879	3,014	2,249	1,550 <small>pr. most common</small>	
	North Jutland	5695	7,259	5,717 <small>pr. most common</small>	3,667	2,385	1,603	
	Zealand	4490	4,670	3,501	2,287	1,676 <small>pr. most common</small>	1,259	
	Southern Denmark	5494	6,076	4,581 <small>pr. most common</small>	2,842 <small>pr. most common</small>	2,169	1,627 <small>pr. most common</small>	
Positive percentage	The capital	34.7	36.4	37.1	32.7	30.7	27.5	
	Central Jutland	39.1	43.6	44.3	39.5	39.4	35.0	
	North Jutland	36.5	44.0	43.7	41.8	38.2	34.6	
	Zealand	31.8	35.3	35.4	32.1	31.1	29.5	
	Southern Denmark	34.0	39.7	39.8	34.8	34.4	32.1	
R (newly infected)	The capital	0.9	0.8	0.8	0.7	0.8	0.7	
	Central Jutland	1.1	0.9	0.9	0.7	0.8	0.6	
	North Jutland	1.1	1.0	0.9	0.8	0.8	0.6	
	Zealand	0.9	0.8	0.7	0.7	0.6	0.6	
	Southern Denmark	1.0	0.9	0.9	0.7	0.8	0.7	
New hospital admissions	The capital	896	934	911	740	643	473	
	Central Jutland	375	546	538	494	420	341	
	North Jutland	195	274	349	339	273	221	
	Zealand	477	454	472	424	362	297	
	Southern Denmark	420	554	558	530	460	401	
	Unknown region	2	8	1	2	1	1	1



Growth rates in the municipalities

Figure 2. COVID-19: Weekly change in incidence, percentage
Figure 2. Covid-19: Percentage change in weekly incidence

Procentvis ændring i ugentlig incidens over 7 dage

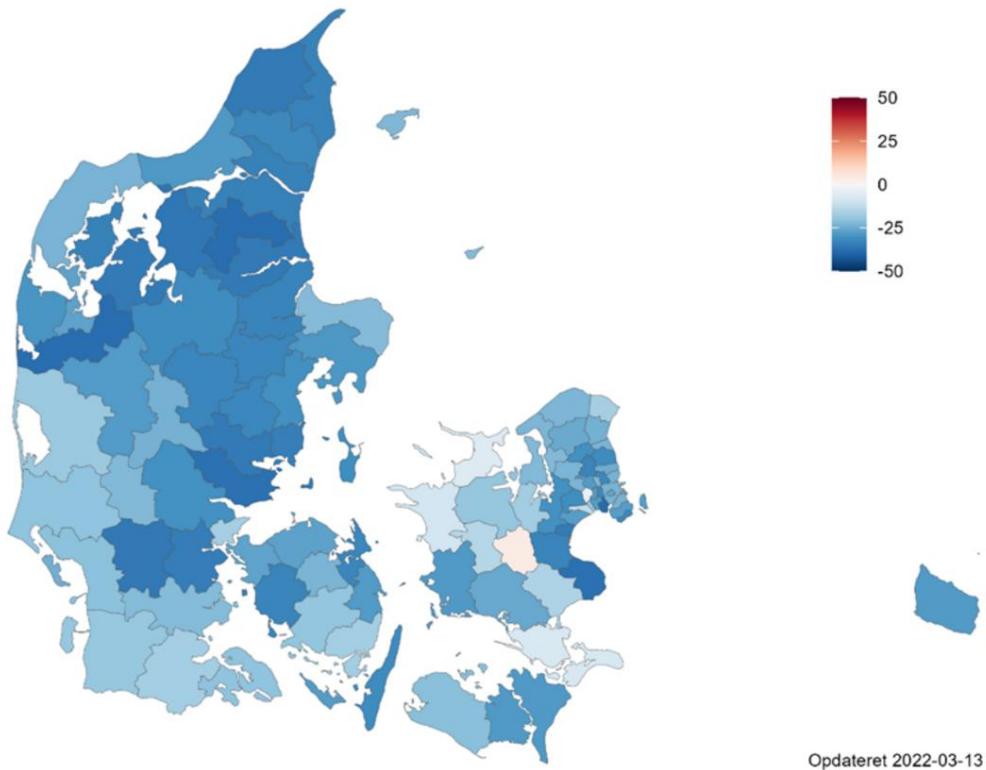




Figure 3. COVID-19: Weekly change in positive percentage, percentage
Figure 3. Covid-19: Percentage change in weekly positive percentage

Procentvis ændring ugentlig positivprocent over 7 dage

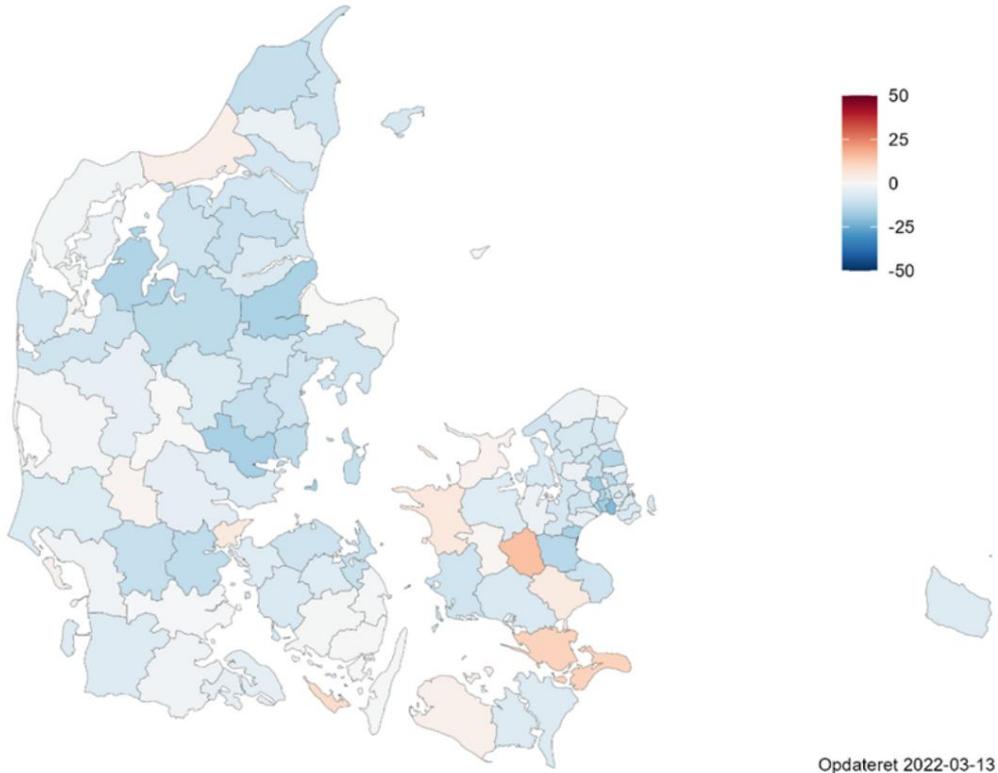
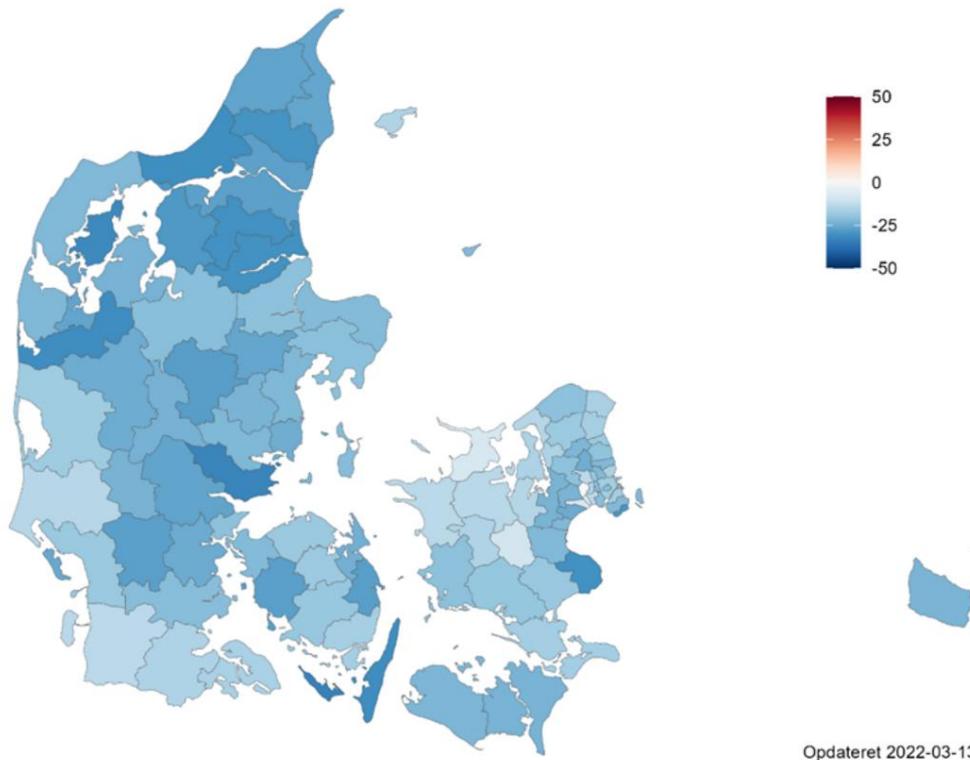




Figure 4. COVID-19: Weekly change in number of tests, percentage
Figure 4. Covid-19: Percentage change in weekly number of tests

Procentvis ændring i ugentlig antal test over 7 dage





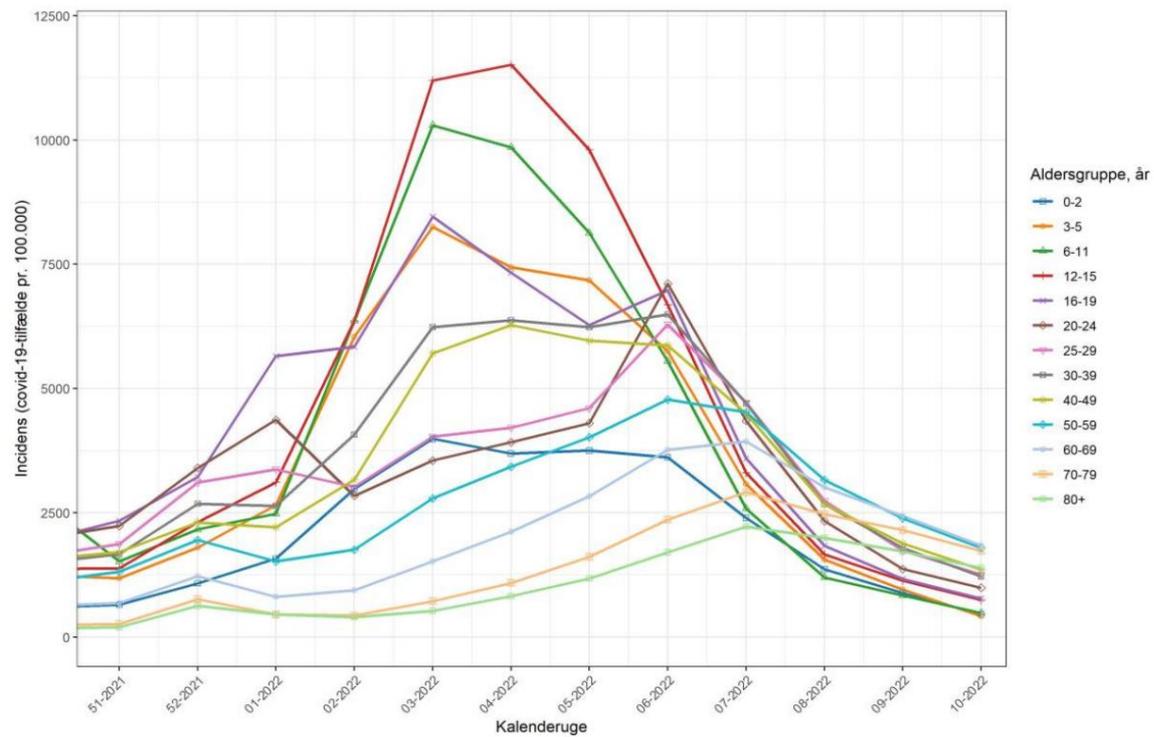
Age incidence

Data is updated backwards.

See also cases by age SSI's regional [dashboard](#).

Figure 5. COVID-19: Age-specific incidence per 100,000 inhabitants

Figure 5. Covid -19: Age-specific incidence per 100,000 inhabitants





Newly admitted

See also age distribution curves of new entrants on SSI's [regional dashboard](#).

Figure 6. COVID-19: PCR-positive hospital admissions (purple), PCR-positive patients in hospital on Monday morning (orange) and confirmed (PCR-positive) cases in population (red)

Figure 6. Covid-19: Newly admitted, hospitalized Monday morning and confirmed cases

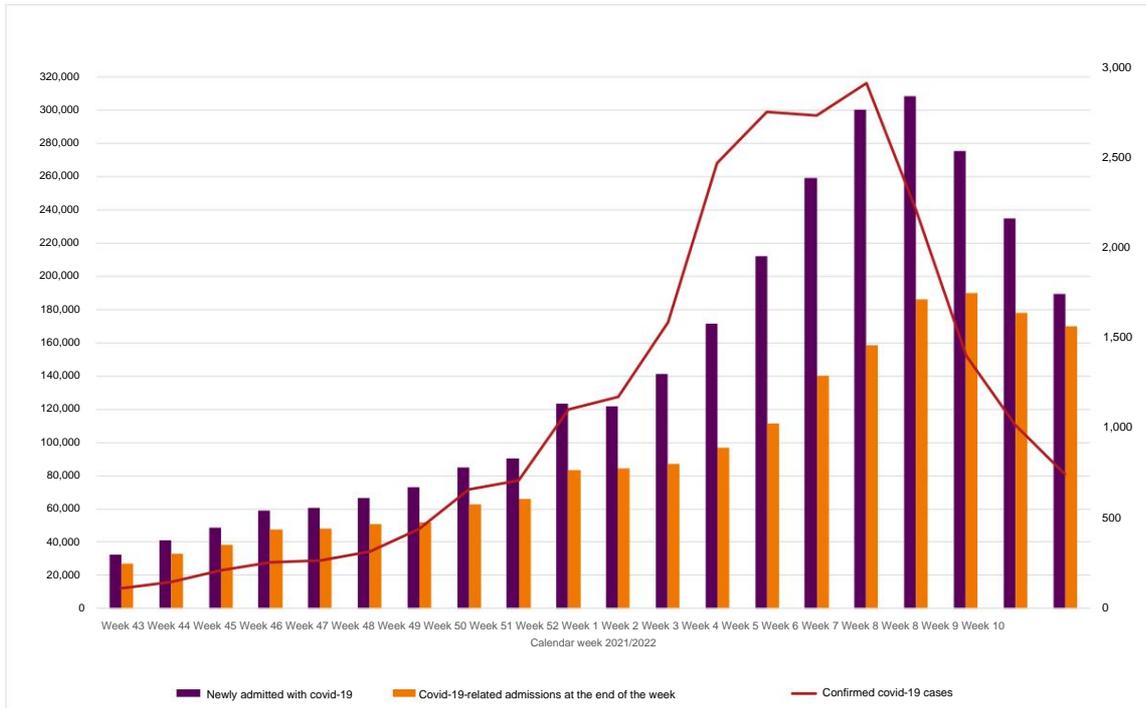
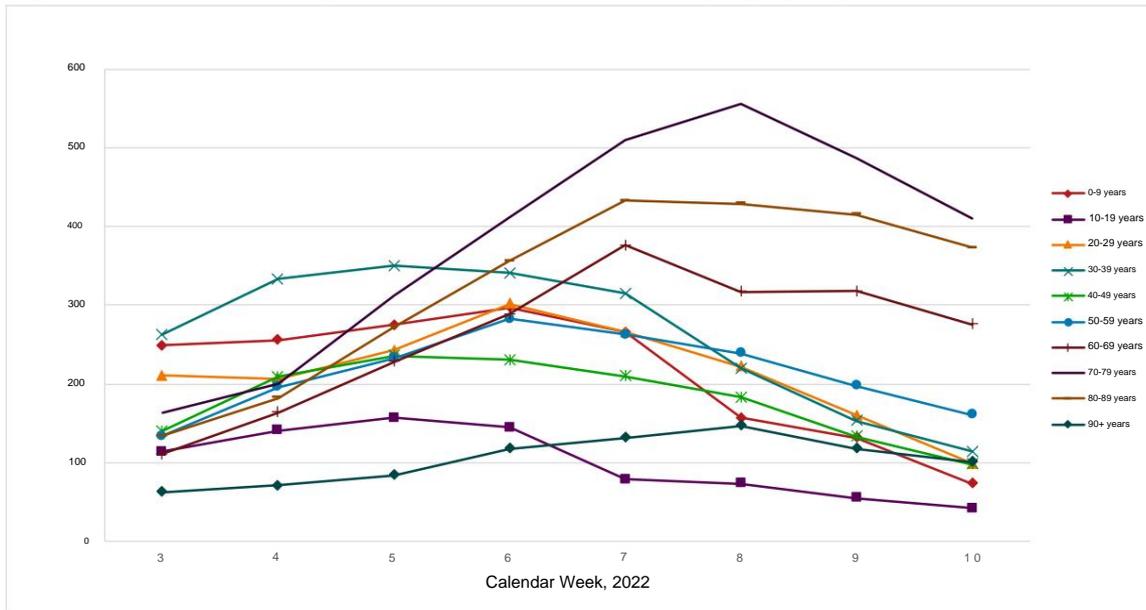




Figure 7. COVID-19: Weekly numbers of PCR-positive hospital admissions by age group
Figure 7. Covid-19: Weekly number of new admissions by age group





The following figures in this section are updated retrospectively.

Figure 8. COVID-19: Proportion of hospital admissions with a positive SARS-CoV-2 test with a COVID-19 diagnosis (red), with a respiratory or tentative COVID-19 diagnosis (green), or with another diagnosis (blue), June 1st 2020 to February 27th 2022

Figure 8. Covid-19: Proportion of new admissions with positive SARS-CoV-2 sample admitted due to covid-19 diagnosis, due to respiratory or obs covid-19 diagnosis, or due to other diagnosis, 1 June 2020 to 27 February 2022

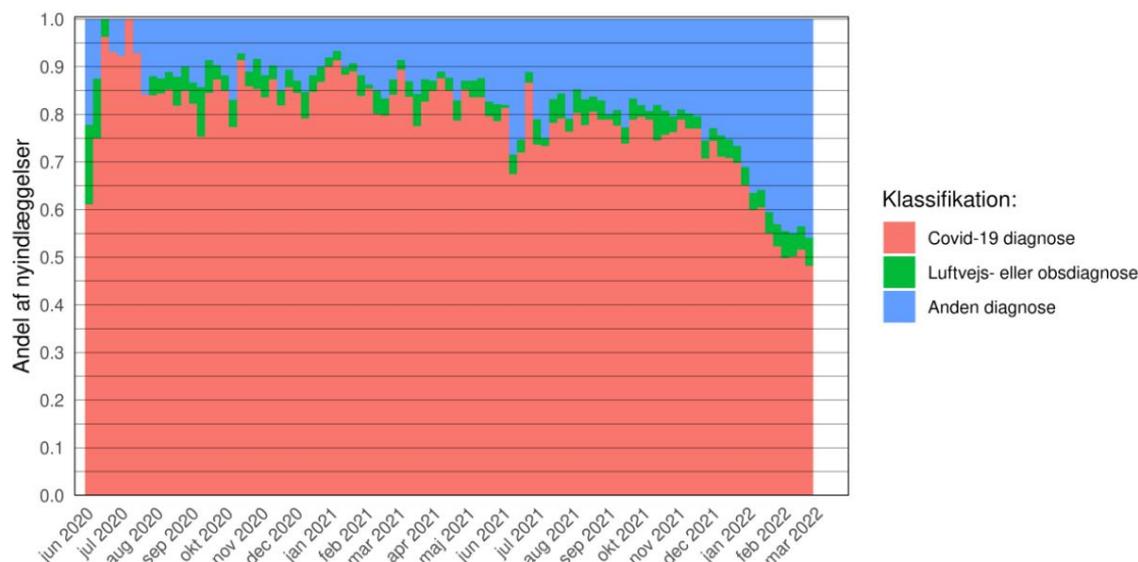


Table 5. COVID-19: Proportion of PCR-positive hospital admissions with a COVID-19 diagnosis, with a respiratory or tentative COVID-19 diagnosis, or with other diagnosis, June 1st 2020 to February 27 th 2022

Table 5. Covid-19: Proportion of new admissions with positive SARS-CoV-2 sample admitted due to covid-19 diagnosis, due to respiratory or obs covid-19 diagnosis, or due to other diagnosis, 1 June 2020 to February 27, 2022

Diagnosis	2022 week						Trend
	3	4	5	6	7	8	
Covid-19 diagnosis	55%	52%	50%	50%	52%	48%	
Respiratory or observational diagnosis	4%	5%	6%	5%	5%	6%	
Second diagnosis	41%	43%	45%	45%	44%	46%	



Figure 9. COVID-19: Proportion of PCR-positive hospital admissions with a COVID-19-diagnosis (red), with a respiratory or tentative COVID-19-diagnosis (green), or with other diagnosis (blue) by age group, June 1st 2020 to February 27 th 2022

Figure 9. Covid-19: Proportion of new admissions with positive SARS-CoV-2 sample admitted due to covid-19 diagnosis, due to respiratory or obs covid-19 diagnosis, or due to other diagnosis divided by age groups, 1 June 2020 to 27 February 2022

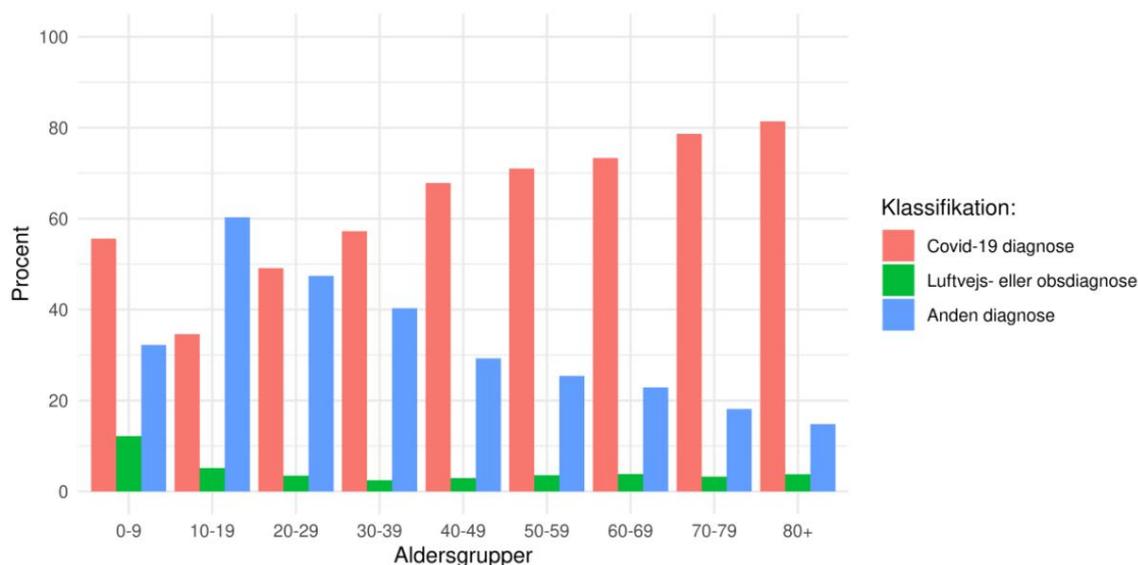


Table 6. COVID-19: Proportion of PCR-positive hospital admissions with a COVID-19-diagnosis, with a respiratory or tentative Covid-19 diagnosis, or with other diagnosis, by age groups 0-59 and 60+ years old

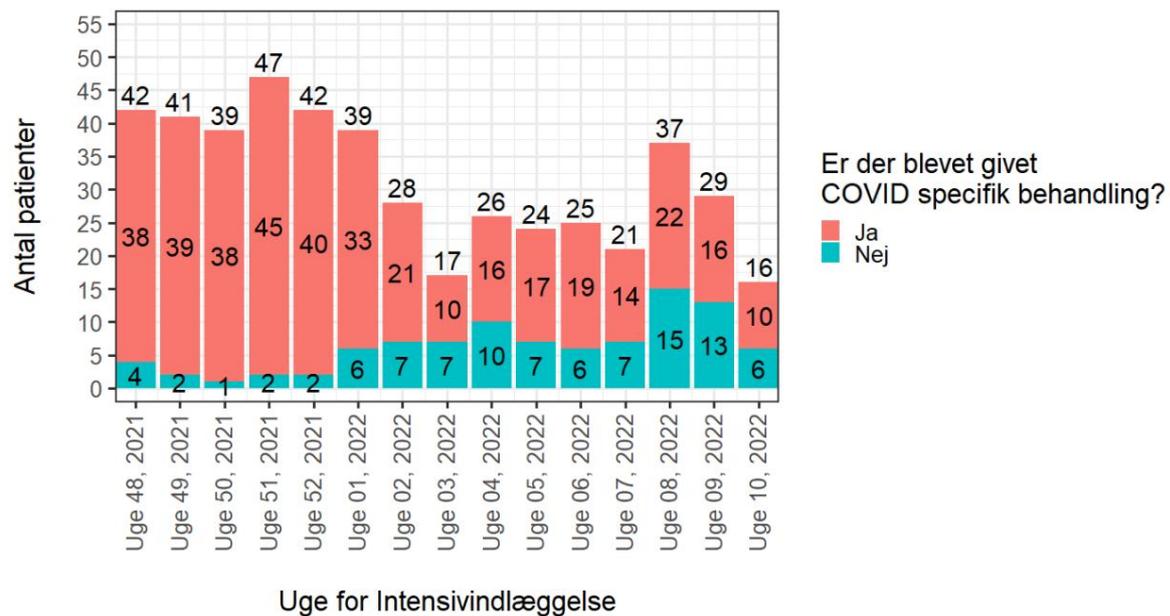
Table 6. Covid-19: Proportion of new admissions with positive SARS-CoV-2 samples admitted due to covid-19 diagnosis, or due to respiratory or obs covid-19 diagnosis, or due to other diagnosis, divided by age groups 0-59-year-olds and 60 + -year-olds

Diagnosis / age groups	2022 week						Trend
	3	4	5	6	7	8	
0-59-year-olds							
Covid-19 diagnosis	49.3%	44.2%	39.8%	41.1%	41.3%	33.1%	
Respiratory or observational diagnosis	5.7%	4.9%	5.3%	4.7%	5.5%	5.2%	
Second diagnosis	45.0%	50.8%	54.9%	54.2%	53.2%	61.7%	
60+ year olds							
Covid-19 diagnosis	68.6%	66.7%	64.6%	63.1%	63.3%	59.6%	
Respiratory or observational diagnosis	2.6%	4.4%	6.6%	4.6%	4.1%	6.1%	
Second diagnosis	28.8%	28.8%	28.8%	32.2%	32.6%	34.3%	



Figure 10. COVID-19: Numbers of intensive care admissions with a positive SARS-CoV-2 test, who received treatment specifically for COVID-19 (Yes (red), No (blue)), 2021-2022

Figure 10. Covid-19: Number of new admissions on intensive care with SARS-CoV-2 positive sample receiving covid-19 specific treatment, 2021-2022





SARS-CoV-2 variants

Sequences from the Danish positive covid-19 samples can be seen here:

<https://www.covid19genomics.dk/home>

Figure 11. COVID-19: The 10 most frequently observed (sub) variants based on whole genome sequencing data

Figure 11. Covid-19: The 10 most frequently observed (sub) variants based on whole genome sequencing data

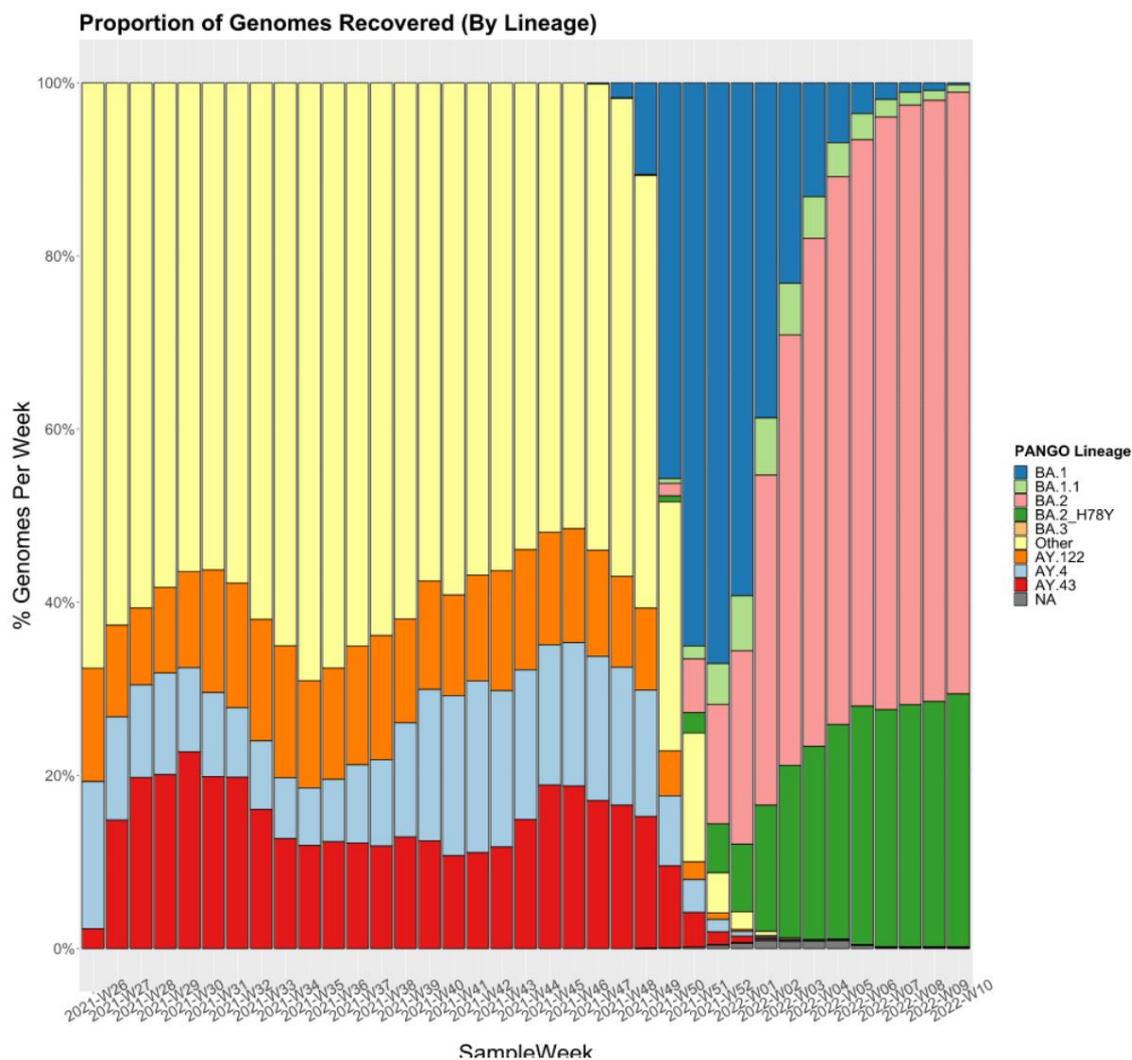




Table 7. COVID-19: The 20 most frequently observed sub (variants) based on whole-genome sequencing data for the last four weeks, 2022

Table 7. Covid-19: The 20 most frequently observed (sub) variants based on whole genome sequencing data in the last four weeks, 2022

The 20 most frequently observed (sub) variants based on whole genome sequencing data in the last 4 weeks					
Lineage	WHO	7	8	9	10
BA.2	Omicron	10074 (68.45%)	10015 (69.25%)	8867 (69.43%)	2088 (69.48%)
BA.2_H78Y	Omicron	4033 (27.40%)	4045 (27.97%)	3622 (28.36%)	879 (29.25%)
BA.1.1	Omicron	295 (2.00%)	210 (1.45%)	143 (1.12%)	25 (0.83%)
BA.1	Omicron	288 (1.96%)	164 (1.13%)	117 (0.92%)	8 (0.27%)
None		21 (0.14%)	21 (0.15%)	18 (0.14%)	3 (0.10%)
BA.3	Omicron	4 (0.03%)	2 (0.01%)	1	4 (0.03%)
AY.4	Delta	2 (0.01%)	(0.01%)	0	(0.01%)
AY.4.6	Delta	0 (0.00%)	(0.00%)	1	(0.00%)
AY.42	Delta	0 (0.00%)	(0.01%)	1	(0.00%)
AY.43.6	Delta	0 (0.00%)	(0.01%)	1	(0.00%)
AY.78	Delta	0 (0.00%)	(0.01%)	1	(0.00%)
B		0 (0.00%)	(0.01%)	(0.00%)	0 (0.00%)
Total		14717	14462	12772	3005

Note to table: Number of variants may change when multiple samples are sequenced and included in the table. Last week's figures are incomplete

and shall be construed with reservations.

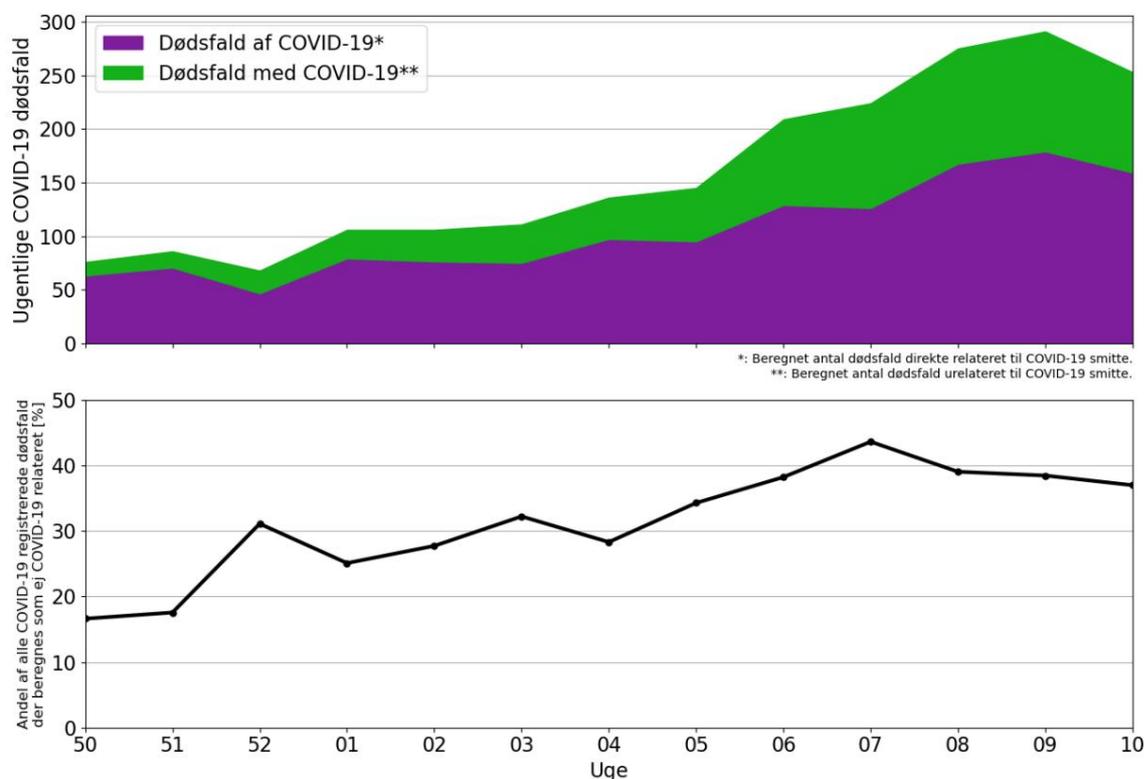


Mortality

SSI contributes every week with monitoring mortality in Denmark, by calculating the number of the total number of deaths in society in relation to the expected number of deaths in Denmark. See also [note on mortality](#). In addition, SSI contributes with mortality monitoring together with 26 other European countries (www.euromomo.eu).

Figure 12. COVID-19: Estimated deaths due to or with COVID-19 and proportion of all COVID 19-registered deaths estimated not related to COVID-19, by week. Calculated number of deaths directly related to COVID-19 infection (purple), calculated number of deaths unrelated to COVID-19 infections (green), 2021/2022

Figure 12. Covid-19: Estimated deaths of or with covid-19 and proportion of all covid-19-registered deaths calculated as non-covid-19-related, broken down by weeks, 2021/2022



Note: Calculation performed by PandemiX Research Center, RUC, in collaboration with EuroMOMO, SSI.



Table 8. COVID-19: Estimated deaths with positive SARS-CoV-2 test within 30 days, total. Deaths due to (caused by) COVID-19. Deaths with (ie not caused by) COVID-19. Proportion of deaths with COVID-19

Table 8. Covid-19: Estimated deaths with positive covid-19 PCR test within 30 days, total, deaths "of" and "with" covid-19 and proportion of deaths with covid-19

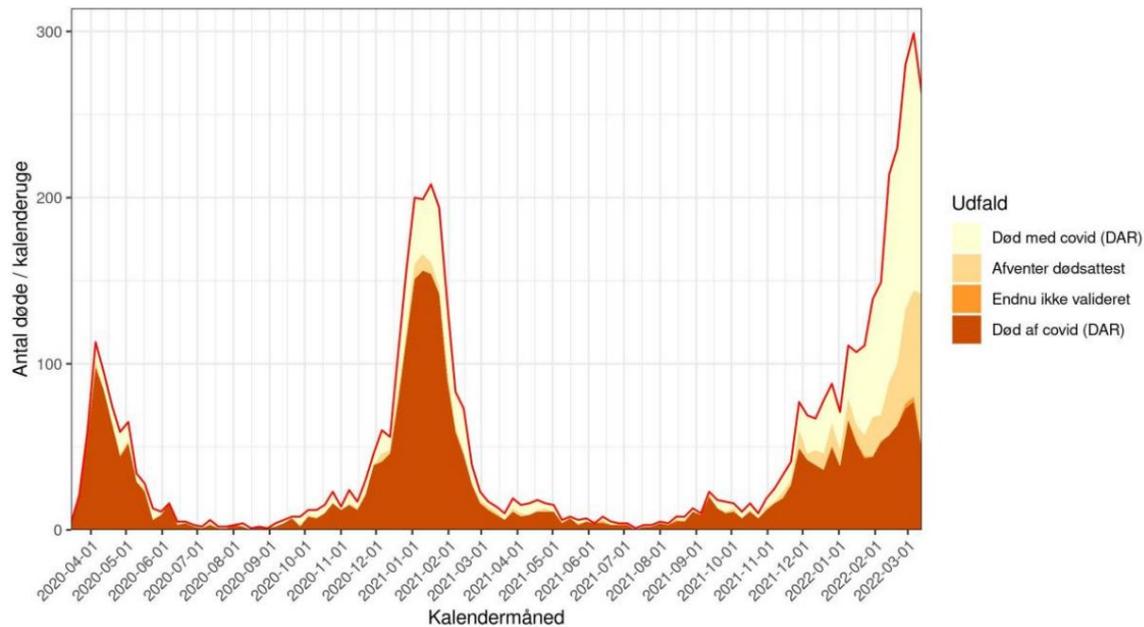
2021/2022, week	Deaths with positive covid-19 PCR test within 30 days, total	Deaths "of" covid-19	Deaths "with" covid-19	Proportion (%) of deaths "with" covid-19
50	76	63	13	16.6
51	86	71	15	17.6
52	68	47	21	31.1
1	106	79	27	25.1
2	106	77	29	27.7
3	111	75	36	32.2
4	136	98	38	28.3
5	145	95	50	34.3
6	209	129	80	38.2
7	224	126	98	43.6
8	275	168	107	39.0
9	291	179	112	38.4
10	253	159	94	37.0

Note: Calculation performed by PandemiX Research Center, RUC, in collaboration with EuroMOMO, SSI.



Figure 13. COVID-19: Deaths by and with COVID-19 based on death certificates (DAR: The Cause of Death Register). Death not related to COVID-19-infection (light), death related to COVID-19-infection (dark), 2020-2022

Figure 13. Covid-19: Deaths by and including covid-19 based on death certificates, 2020-2022

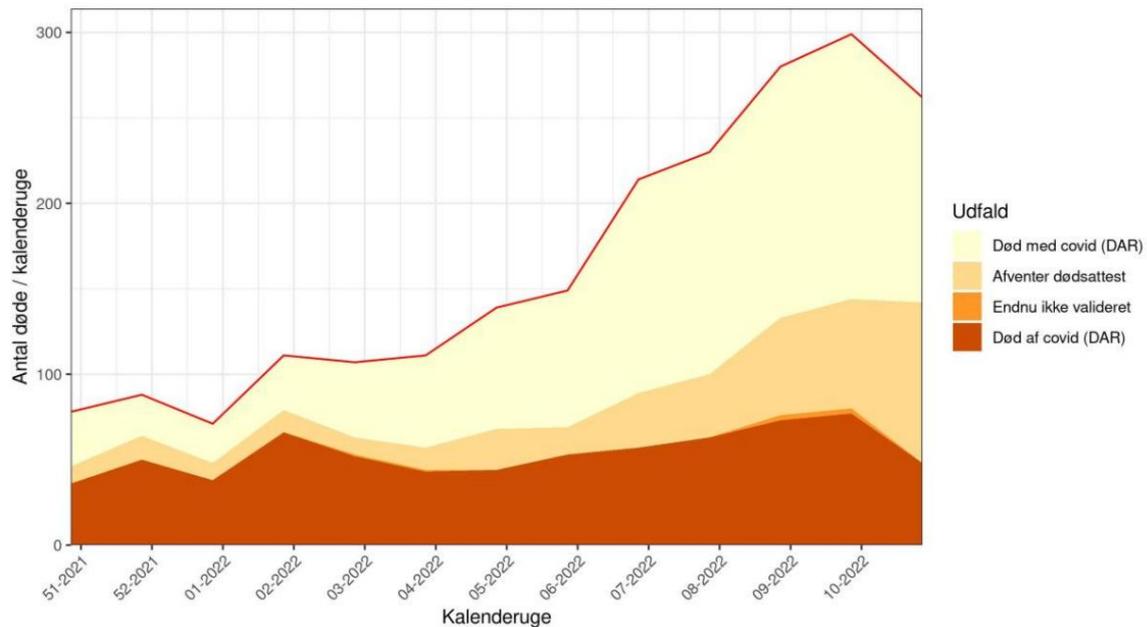


Note: Prepared on the basis of data from the Cause of Death Register (DAR) via the Danish Health and Medicines Authority



Figure 14. COVID-19: Deaths by and with COVID-19 based on death certificates (DAR: The Cause of Death Register). Death not related to COVID-19-infection (light), death related to COVID-19-infection (dark), 2021/2022

Figure 14. Covid-19: Deaths by and including covid-19 based on death certificates, 2021/2022



Note: Prepared on the basis of data from the Cause of Death Register (DAR) via the Danish Health and Medicines Authority



Hospital outbreaks

Table 9. COVID-19: Outbreaks at hospitals

Table 9. Covid-19: hospital outbreaks

Hospital outbreaks	2022 week					
	5	6	7	8	9	10
Number of outbreaks (out of 12 infection control units)	6	3	8	5	4	2
Of which no outbreak	3	0	2	3	2	1
Of which units with eruptions	3	3		2	2	1
Total number of outbreaks	9	8	6 16	7	6	3
Number of major outbreaks (> 20 infected, patients and / or staff)	0	0	0	1	0	0
Number of medium-sized outbreaks (11 to 20 infected, patients and / or staff)	2	3	3	2	3	0
Number of minor outbreaks (≤10 infected, patients and / or staff)	7	5	13	4	3	3

Nursing home

Table 10. COVID-19 at nursing homes

Table 10. Covid-19 in nursing homes

Covid-19, nursing home	2022 week				
	6	7	8	9	10
Confirmed cases among residents	2,055	2,302	2,002	1,700	1,288
Deaths among confirmed cases	88	99	134	116	109
Confirmed cases among residents with expected full effect after primary vaccination course	100	90	75	49	39
Confirmed cases among residents with expected full effect after revaccination	1,890 in most common	2,141	1,872 in most common	1,603	1,213
Nursing homes with confirmed cases	518	548	524	472	382



Special staff groups

Data is updated backwards. The groups shown cannot be further subdivided due to personal data considerations.

Table 11. COVID-19: Confirmed cases among employees in the social sector

Table 11. Covid-19: confirmed cases among employees in the social sector

Covid-19, 2022						
Business	Week 8		Week 9		Week 10	
	Quantity confirmed cases	Incidence per 100,000 in the group	Quantity confirmed cases	Incidence per 100,000 in the group	Quantity confirmed cases	Incidence per 100,000 in the group
Day care, day centers, home help mv.	2,201	4,256	1,512	2,924	1,107	2,141
Nursing homes, etc.	5,997	4,718	3,994	3,142	3,085	2,427 <small>in most common</small>
Social in total	8,198	4,284 <small>in most common</small>	5,506	3,079	4,192	2,344

Table 12. COVID-19: Confirmed cases among employees in the health care sector

Table 12. Covid-19: confirmed cases among healthcare workers

Covid-19, 2022						
Business	Week 8		Week 9		Week 10	
	Quantity confirmed cases	Incidence per 100,000 in the group	Quantity confirmed cases	Incidence per 100,000 in the group	Quantity confirmed cases	Incidence per 100,000 in the group
Healthcare and others	2,104	3,774	1,420 <small>in most common</small>	2,601	1,023 <small>in most common</small>	1,853
Hospitals	5,163	4,037	3,675	2,873	2,558	2,000
Total health	7,267	3,957	5,125	2,791	3,591	1,955

Table 13. COVID-19: Confirmed cases among employees in day care institutions

Table 13. Covid-19: confirmed cases among employees of institutions

Covid-19, 2022						
Business	Week 8		Week 9		Week 10	
	Number confirmed coincidence	Incidence per 100,000 in the group	Number confirmed coincidence	Incidence per 100,000 in the group	Number confirmed coincidence	Incidence per 100,000 in the group
Institutions *	2,609	3,030	1,717 <small>in most common</small>	1,994	940	1,092

* Age-integrated institutions, kindergartens, day care centers, crèches.

Table 14. COVID-19: Confirmed cases among employees in the education sector

Table 14. Covid-19: confirmed cases among employees in the education sector

Covid-19, 2022						
Business	Week 8		Week 9		Week 10	
	Number confirmed coincidence	Incidence per 100,000 in the group	Number confirmed coincidence	Incidence per 100,000 in the group	Number confirmed coincidence	Incidence per 100,000 in the group
Primary school	3,120 <small>in most common</small>	2,679	2,359	2,019	1,719 <small>in most common</small>	1,472
Colleges and vocational schools	1,180 <small>in most common</small>	3,095	935	2,452	727	1,907



Sewage

You can read more about [wastewater](#) measurements on SSI's website with monitoring of SARS-CoV-2 .

Please note that as of January 3, 2022, a new PCR test has been introduced. Therefore, the results from before and after this date can not be directly compared.

From week 8, the curve of SARS-CoV-2 concentration in wastewater is shown as a weekly average of RNA copies per capita. Previously, the curves showed a moving weighted average. However, this meant that the curves were adjusted slightly backwards in time, in line with new wastewater measurements.

Figure 15. COVID-19: Incidence and results from waste-water surveillance, 2021/2022

Figure 15. Covid-19: Incidence and results from wastewater measurements, 2021/2022

Covid-19 incidens og resultater fra spildevandsmålinger

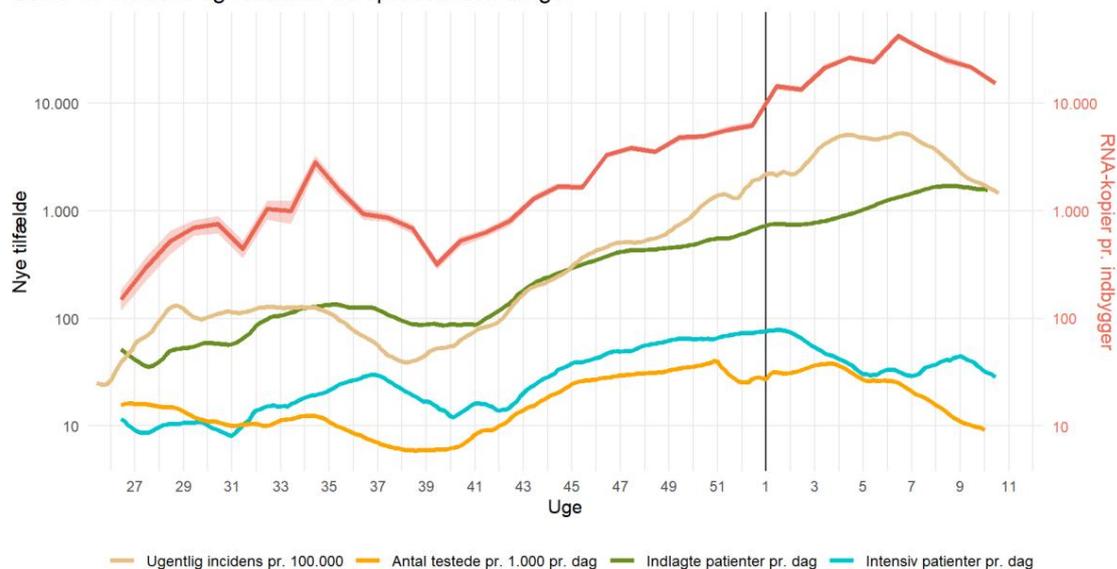
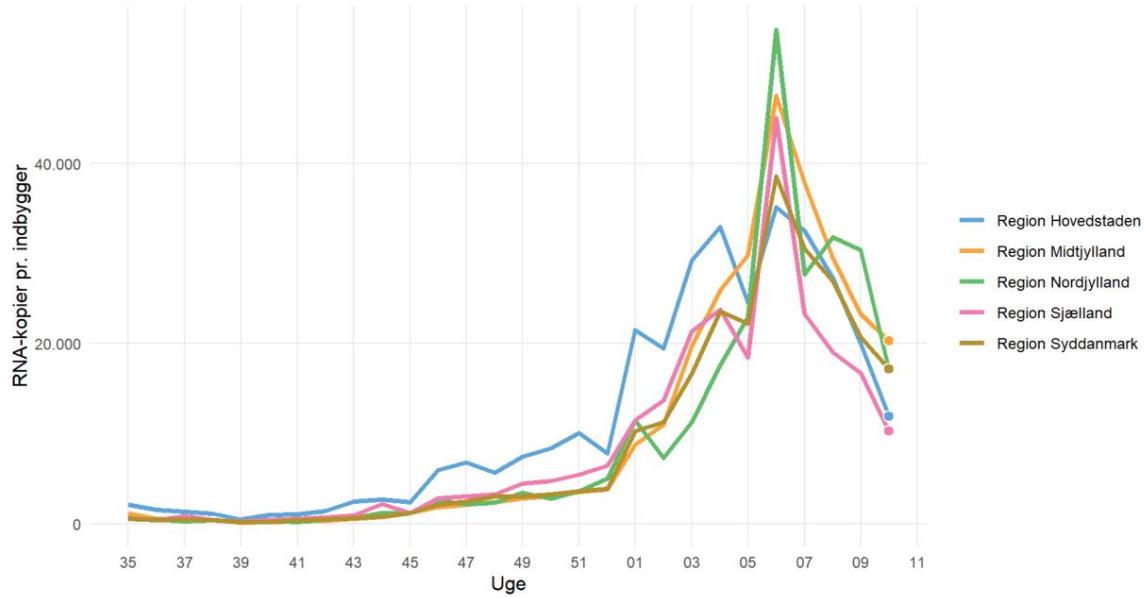




Figure 16. COVID-19. Results from waste-water surveillance by region, 2021/2022
Figure 16. Covid-19: Results from wastewater measurements by regions, 2021/2022

Resultater fra spildevandsmålinger





Presumably infected with covid-19 and symptoms

You can read more about [COVIDmeter](#) on SSI's website with monitoring of SARS-CoV-2 .

Data is updated backwards.

Figure 17. COVID-19: Proportion of participants in user-panel presumably infected with COVID-19 per week. Gray color indicates confidence interval for the calculation.

Figure 17. Proportion of responses from participants presumed infected with covid-19 per week the last 5 months. The gray color indicates the confidence interval for the calculation (dark gray 95%, light gray 99%).

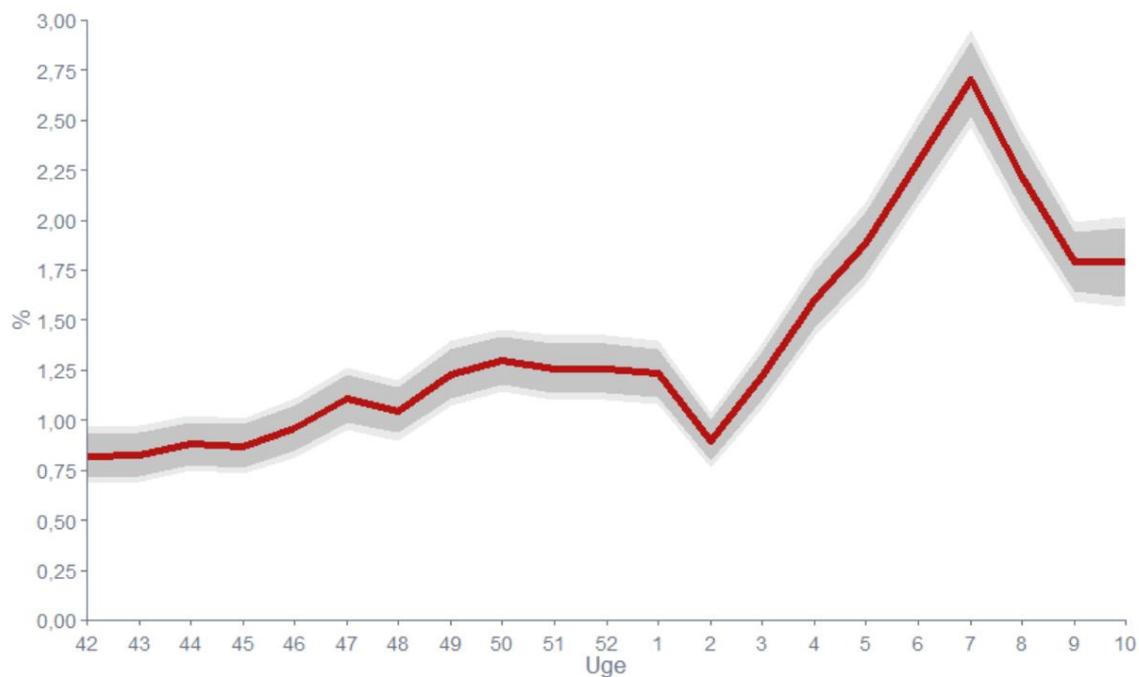
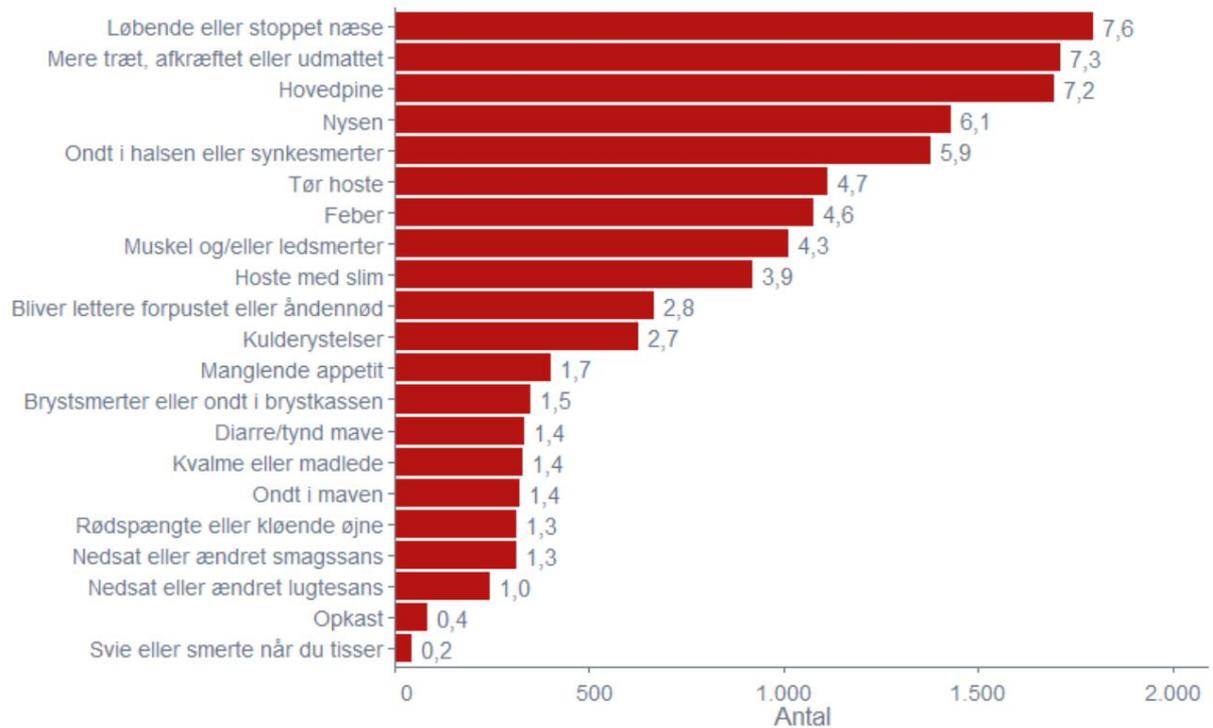




Figure 18. COVID-19: Symptoms reported to COVIDmeter by number in week 10, 2022.

Figure 18. Covid-19: Symptoms reported to COVIDmeter by number in week 10, 2022.





Data basis

Covid-19

This report is based on PCR-confirmed cases.

Data for the most recent week are drawn on the preparation date. Data is not updated backwards unless otherwise stated. Data for positive PCR tests are calculated on the sample date, and therefore there may be some samples from the most recent week for which no response has yet been received. However, it is considered that the data is sufficient to assess trends and signals. It is also assessed that backward changes in data are small and insignificant in relation to the conclusions in the report.

The positive percentage is calculated so that a person can only contribute with one negative test per week. Individuals with previous covid-19 infection are not included in the calculation.

Definition of incidents in the report

In this report, the following method has been used to calculate the incidents per week:

When describing the country, region and age incidents in the report, the number of confirmed cases in the week in question (7 days calculated on a test date) per 100,000 inhabitants has been used.

Populations for calculating incidence

To be part of the underlying population, several criteria must be met, including that:

- the person must have a valid municipal code that matches an existing one commune
- gender must be stated
- the person must have a valid road code.

The persons included are therefore persons who meet the above criteria, have a valid civil registration number and are resident in Denmark. The population is based on the cpr register and is updated monthly.



Growth rates in the municipalities

The analysis is based on the public infection figures, calculated per municipality (COVID-19 monitoring data¹). For each day in the past 7 days, the number of positives and the number of tests, respectively, are calculated. Subsequently, the total number of positives in the past 7 days has been converted to incidents per 100,000 inhabitants in the municipality (7-day incidents), as well as to a positive percentage in the municipality. It is noted that here an average of 7-days positive percentage rather than the daily positive percentages. Furthermore, it is noted that the data source used does not yet include reinfections, which is less important, however, as relative changes are considered.

As a simple estimate of the change over time, the change is calculated from a 7-day period relative to the previous 7-day period.

The comparison of 7-day incidents has been chosen not to include the weekly variation, where the incidence is higher on the weekdays where relatively more testing takes place.

Definition of covid-19 related admissions in SSI's covid 19 monitoring

For a more detailed definition of covid-19 admissions, see the [Focus Report on COVID 19-related hospital admissions during the SARS-CoV-2 epidemic](#), published d.6. January, 2022.

Characterization of covid-19-related admissions based on hospital diagnoses - development of new algorithm Covid-19-related admissions will be divided into 3 categories via this algorithm:

- Covid-19 diagnosis: Patients who have been diagnosed with covid-19, and thus have been assessed by the attending physician to be ill with covid-19.
- Respiratory diagnosis or observation (obs) for covid-19: Patients diagnosed with another respiratory disease where the symptoms are completely or partially overlapping with covid-19, or where covid-19 is suspected.
- Other diagnosis: Patients who have not been diagnosed with covid-19 or a diagnosis of respiratory disease or observation of covid-19, but instead have completely different diagnoses during hospitalization, e.g. fracture, pregnancy or concussion.

In the day-to-day monitoring of the SARS-CoV-2 epidemic, SSI has defined a covid-19 related hospitalization as a hospitalization among individuals with a positive SARS-CoV-2-test taken from 14 days before admission or during admission. If a positive SARS-CoV-2 test is detected in the period 14 days before to 48 hours after

¹ <https://covid19.ssi.dk/overvagningsdata/download-fil-med-overvaagningdata>



the time of admission, the covid-19-related admission starts at the time of admission. Patients who test positive for SARS-CoV 2 during hospitalization more than 48 hours after the time of hospitalization are also registered with a covid 19-related hospitalization, but here the hospitalization date is considered to be equal to the test date (the period of 14 days before to 48 hours after is chosen as there is an expected latency period from infection to development of serious illness that may lead to hospitalization).

The inventory of covid-19-related admissions in SSI's monitoring is based on 3 data sources:

- SARS-CoV-2 test results and variant PCR responses from the Danish microbiology database (MiBa).
- Information on admissions registered in the National Patient Register (LPR).
- Snapshot data from the regions that twice daily provide an overview of hospitalized covid-19 patients.

When it is established whether a patient has been admitted with covid-19, another respiratory or obs diagnosis or other diagnosis, the registration will always take place with a delay in relation to the time of admission. Therefore, it must take 14 days before the data is accurate, which means that this data is older than the other data in the report.

Data for covid-19 related treatment of new admissions to intensive care are provided from the Danish Intensive Covid Database and the Danish Intensive Database. Data are collected by manually collecting patients' medical records. For data collection method, see [http://www.cric.nu/danish-icu covid-19-report /](http://www.cric.nu/danish-icu-covid-19-report/). [Data for intensive care units by variant type](#) are based on another database, where, for example, intensive care units also include patients who have received intensive care but have not been admitted to an intensive care unit. Therefore, there may be differences in the number of entries between the tables.

SARS-CoV-2 variants

The "SARS-CoV-2 variants" section is based on results from whole genome sequencing.

Data for the most recent week are drawn on the preparation date. Data is continuously updated backwards as results from sequencing are added. Data are calculated on a sample date, and therefore there may be some samples from the most recent week for which no response has yet been received. However, it is considered that the data is sufficient to assess trends and signals. It is also assessed that backward changes in data are small and insignificant in relation to the conclusions in the report.



Mortality

Calculation of deaths with and by covid-19

In the daily counts of covid-19-related deaths, all deaths that have occurred among persons with at least one positive PCR test within the last 30 days are counted. The definition of covid-19-related death is international standard, has been in use since the beginning of the epidemic and is relatively easy to use in practice.

However, with a high incidence of covid-19, the definition will include a number of individuals who have tested positive but who have died of other causes. Based on the number of deaths per week and the incidence of covid-19 infection, it can be calculated using probability mathematics how many people have died "of" covid-19, and how many have died "of" covid.

The analysis assumes that all individuals in the group have the same probability of testing positive and the same probability of dying during the period - or at least that the two variables are independent. Younger (0-39-year-olds) have e.g. ca. 20% probability of testing positive during the period and at the same time very low probability of death, while the elderly (65 + - year olds) only has approx. 2.5% probability of testing positive and at the same time significantly higher risk of death. It is therefore necessary to perform the analysis for each age group separately. In the analysis, we have for practical reasons chosen to use the age groups 0-19, 20-39, 40-59, 60-69, 70-79 and 80+ -year-olds. The exact choice of age groups will not significantly affect the final result, but if the method is used without age division, answers will emerge that cannot be used.

The age-specific 30-day incidence of positive covid-19 test is taken from SSI's weekly inventories. The weekly age-specific information on the number of deaths among test-positive individuals is retrieved at the same place. The total weekly age-specific deaths are taken from SSI's contribution to the EuroMOMO monitoring and apply EuroMOMO's normal method of correction for delays in the registration of deaths.

Further details about the methods and interpretations used can be requested from SSI and PandemiX Research Center at Roskilde University Center.

Validation of Covid-19 died, cf. the Cause of Death Register

A more accurate way of calculating how many have died "of" covid-19 and how many have died "of" covid-19 is by using death certificates. However, this method causes more delay in data. Data from the Cause of Death Register via the Danish Health and Medicines Authority include deaths, where one of the following ICD10 codes on the death certificate is marked as the underlying cause:

- Covid-19 infection without indication of location
- Covid-19, severe acute respiratory syndrome
- Coronavirus infection without specification
- Covid-19, virus identified
- Covid-19, virus not identified

Death is included if 30 days or less have passed since the positive SARS-CoV 2 test.



Vaccination status

Reservations and explanation of data on the number of confirmed cases, hospitalizations and deaths in relation to vaccination status in the individual age groups:

Data for confirmed cases, hospitalized or dead by vaccination status are calculated for the individual age groups on vaccination status. In order to be able to calculate incidence on a weekly basis, vaccination status is maintained at the beginning of the week in question (Monday in the calculated week), and a person who is vaccinated during the week does not change vaccination status until Monday of the following week.

Nursing home

Full effect after primary vaccination course is calculated from 14 days after the last vaccination in the primary vaccination course and until the day before the date of revaccination. Full effect after revaccination is calculated from 14 days after the date of revaccination.

Sewage

Trend analyzes:

SARS-CoV-2 virus concentrations in wastewater are measured as the number of RNA copies per liter of wastewater. The trend analyzes are carried out by giving the wastewater measurements from each treatment plant a weight, in relation to the number of residents in the catchment area, after which they are added together. The combined measurements are then presented in a graph showing the results in virus concentration over time.

Pr. 3.1.2022 a new PCR test has been taken into use. Therefore, the results from before and after 3.1.2022 can not be compared directly.

COVIDmeter

Presumably infected with covid-19 and symptoms are based on data from COVIDmeter.

COVIDmeter is a digital solution where citizens can sign up for a user panel and weekly report whether they have had symptoms or not. The number of responses is fairly stable at 30,000 per week.

The COVIDmeter participants are not a representative sample of the Danish population, for example, women and people aged 40-70 are overrepresented in the user panel.

In order to be included in the analyzes, the user must have submitted a minimum of three answers.

For COVIDmeter, a separate analysis has been made to be able to answer the question of which symptom composition is most likely due to covid-19. It is based on data from people who have had symptoms and tested positive for covid-19 and people who have had symptoms but who tested negative for covid-19. These are data from two other monitoring systems (SSI's sentinel monitoring and SSI's interviews with people who tested positive for covid-19).

If you meet the case definition two weeks in a row, you are only included as presumably infected with covid-19 in the first week.



Other respiratory diseases

This report is based on people tested.

Data for the most recent week are extracted on the preparation date. Data is not updated backwards unless otherwise stated. Data for positive PCR tests are calculated on the sample date, and therefore there may be some samples from the most recent week for which no response has yet been received. However, it is considered that the data is sufficient to assess trends and signals. It is also assessed that backward changes in data are small and insignificant in relation to the conclusions in the report.

The positive percentage is calculated so that a person who tests positive is only included the first time he or she tests positive per week, while everyone tested in the denominator can only count once per week.

Definition of incidents in the report

In this report, the following method has been used to calculate the incidents per week:

Number of confirmed cases in that week (Monday through Sunday) per 100,000 inhabitants.

The background population is the entire population of Denmark.

Links

Inventories of covid-19 in Denmark can be seen here:

[Covid-19 monitoring figures - updated every Tuesday](#)

[Every Tuesday, an overview](#) of possible outbreaks in schools is published on SSI's website .