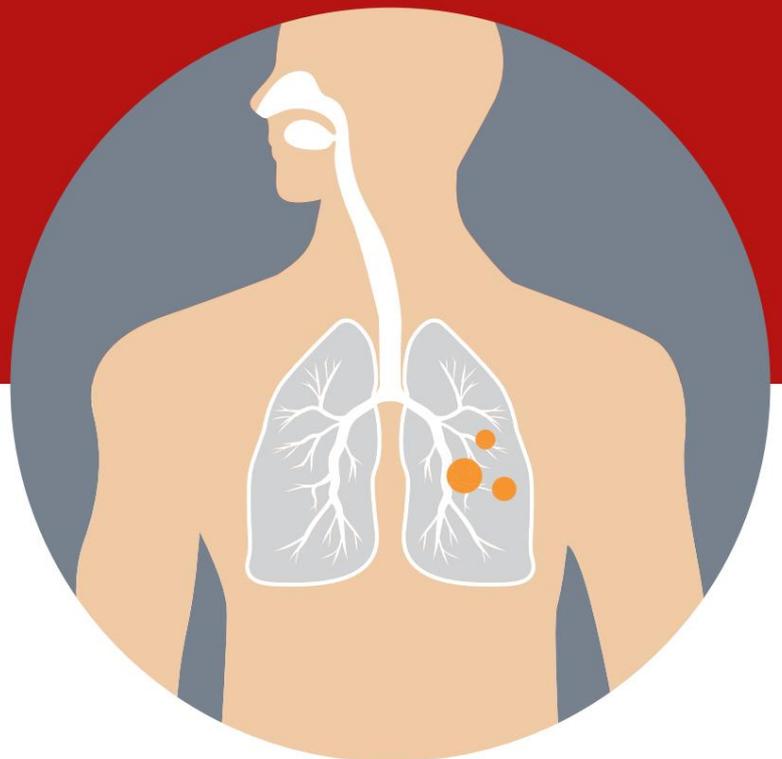


Weekly trends: covid-19 and other respiratory infections

Week 10 | 2022





The epidemiological development of covid-19 and other respiratory infections in Denmark from week 8 to week 9

Prepared March 8, 2022

Published March 10, 2022



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Overall assessment

On a national level case numbers continue to decrease with a 27% decline between weeks 8 and 9. The decrease is seen in all five regions and is now accompanied by a stabilization in the rate of test positive. Test activity in week 9 continues to decline, now to a level of around 60,000 PCR tests / day. In wastewater samples, a decrease in the concentration of SARS-CoV-2 is also observed on a national level,

Case numbers continue to decrease in all age groups, with the highest number recorded in week 9 among 50-69 year olds. The number of new hospital admissions has decreased by 15% in week 9, with a stabilization in number of admitted in intensive care units. The proportion of patients in intensive care units given COVID-19-specific treatment has declined to 54% in week 9. The number of new admissions to hospital has decreased or stabilized across all age groups in week 9. The proportion of patients with a positive SARS CoV-2 test hospitalized because of a COVID-19 diagnosis has decreased from 75% in December 2021, now looking stable around 50%. The proportion hospitalized because of a COVID-19 diagnosis is higher among the older age groups - 64% in week 7. The number of COVID-related deaths has declined in week 9 compared to week 8.

As the number of cases decrease in general, we expect a subsequent decline in COVID 19-related hospital admissions and deaths not caused by COVID-19. The latest probability estimates for week 9 suggest that the proportion of deaths by other causes than COVID 19 has stabilized. There are still signs of slight excess mortality, especially in the older population of 85 years and above - a tendency also described in previous reports.

Case numbers of influenza have increased slightly despite a relatively stable test activity. Especially since week 7 we have observed an increase in the number of new hospital admissions with a positive test for influenza.

Case numbers are still expected to decline across the country in the next weeks. As case numbers also decline among the older age groups, we expect a subsequent decrease in COVID-19 related new hospital admissions and deaths.



Summary

- The number of new cases of covid-19 has decreased by 27% between week 8 and week 9 corresponding to the incidence in week 9 having dropped to 1,889 cases per 100,000 inhabitants. The positive percentage has decreased from 36% in week 8 to 35% in week 9. There is still a decrease in both the number of PCR tests (24%) and in antigen tests (36%).
- The incidence is still highest in the North Jutland Region (2,385 per 100,000 inhabitants), and declining incidences are still seen in all five regions from week 8 to week 9.
- The positive percentage is declining in three regions, while it is stable in the Central Jutland Region and the Region of Southern Denmark, which is still seen in parallel with a decrease in the number of tests. Week 9 shows the highest positive percentage in the Central Jutland Region (39.4%).
- At the national level, the incidence is now highest among the 60-69-year-olds (2,438 per 100,000 inhabitants) and the 50-59-year-olds (2,386 per 100,000 inhabitants). A decrease is seen in all age groups.
- The number of new admissions related to covid-19 has decreased to 2,169 in week 9, and there is a decrease in all age groups except the 60-69-year-olds, where a stabilization is seen from week 8 to week 9. 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 increased from 50% in week 6 to 52% in week 7. In week 7, the proportion admitted with a covid-19 diagnosis 41% for the 0-59 year olds and 64% for the 60+ year olds.
- Data from the Danish covid-19 intensive care database show that the proportion of covid-19-related admissions to the intensive care unit where covid-19-specific treatment has been given is 64% in week 8 and 54% in week 9. Link: [Dansk Intensiv Database](#).
- The number of covid-19-related deaths has dropped from 275 in week 8 to 268 in week 9.
- There are still signs of low excess mortality in Denmark, especially among the elderly aged 85+. However, the mortality rates of recent weeks must be taken with reservations due to post-registration.

In week 9, it is estimated on the basis of probability calculations that 39% of the covid-19-related deaths occurred for a reason other than covid-19. This means that there are signs of a stabilization in the proportion of covid-19-related deaths that are estimated to occur due to covid-19.



- 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 in the past month as the omicron variant has led to a high level of societal infection. And from week 3, deaths that have occurred for a reason other than covid 19 have increased to over 62% among 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 44% in week 9.
- Infection among nursing home residents has decreased from 2,002 cases in week 8 to 1,700 in week 9. There were 116 deaths among residents with covid-19 in nursing homes in week 9 compared with 134 in week 8.
- Infection among employees in the health, social and education sectors continues to decline from week 8 to week 9.
- The proportion of BA.2 in week 9 is approx. 98%, which is on a par with week 8 where it was 97%. A stable proportion of BA.2 cases are BA.2 with the H78Y mutation. It should be noted that the latest figures of variants for week 9 should be interpreted with reservations, as the number of sequences is still low.
- In week 9, a decrease in SARS-CoV-2 concentration in the wastewater is seen at national level. Divided by regions, there is also a decrease in SARS-CoV-2 concentration in the wastewater in all regions.
- From this week, data from COVIDmeter is included. The proportion of COVID-meter user panel suspected of being infected with covid-19 has dropped from 2.2% at week 8 to 1.8% at week 9. The most common symptoms reported at week 9 were runny or stuffy nose (8.0%), more tired, debilitated or exhausted (7.9%) and headache (7.8%).
- In week 9, there is still an increase in the number of infected and the number of new patients with influenza, especially in the Greater Copenhagen area and Funen. This is Influenza A. The increase in recent weeks may indicate an incipient delayed flu season.



Overall assessment

The infection continues to fall between week 8 and week 9 corresponding to 27%. The decrease in infection occurs across the country, and is accompanied by a decrease or stabilization in positive percentage, which can also be seen in all 5 regions. The test activity is steadily declining, and in week 9 is down to an average of 60,000 PCR tests daily in week 9. There is also a registered decrease in the concentration of SARS-CoV-2 in the wastewater across the whole country.

The infection decreases in all age groups, and the highest infection was in week 9 among the 50-69 year olds. There is a decrease in the number of new admissions of 15% in week 9, and a relatively stable development in the number of admissions to intensive care, and in week 9 there is a decrease in the proportion of intensive care recipients receiving covid-specific treatment to 54%. There is a decrease or stabilization in new admissions across all age groups in week 9. The proportion of patients admitted due to a covid-19 diagnosis has been declining from approx. 75% in December, but appears to be stable around 50%. The proportion admitted due to a covid-19 diagnosis is still higher among the older age groups over 60 years, corresponding to 64% in week 7. The number of covid-related deaths has decreased in week 9 compared with week 8.

As infection in the community decreases, the proportion of both covid-related hospitalizations and deaths that occur for a reason other than covid-19 is expected to begin to decrease. In the most recent probability calculations, for week 8, there is evidence that the proportion of deaths estimated to be caused by a cause other than covid-19 has stabilized. There are still signs of a low overall excess mortality, especially among the elderly over the age of 85, as also described in recent trend reports.

There are signs of an increasing incidence of cases of influenza despite relatively stable test activity. Especially since week 7, there has been an increase in inpatients with a positive test for flu.

The infection is expected to continue to fall further across the country over the coming weeks. As the number of new cases among the older age groups decreases, the number of covid-19-related admissions and deaths is also expected to decrease.

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
	4	5	6	7	8	9	4-9
Incidence pr. 100,000 inhabitants * 5,105		5,061	5,395	4,081	2,889	1,889	
R (newly infected)	1.0	1.0	0.9	0.9	0.7	0.8	
Number of tests performed (PCR)	1,305,989	1,088,298	1,023,574	766,439	546,574	415,952	
Confirmed cases (PCR)	299,212	296,630	316,181	239,265	152,217	110,778	
Positive Percentage (PCR)	29.7	35.4	39.8	40.1	35.8	34.5	
Number of tests performed (antigen)	1,249,869	819,679	641,090	343,289	227,407	145,760	
Confirmed cases (antigen, PCR confirmed) **	54,202	47,100	48,378	30,993	18,395	-	
Positive percentage (antigen)	4.3	5.8	7.5	9.0	8.1	-	

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
	4	5	6	7	8	9	4-9
New hospital admissions	1,959	2,391	2,774	2,889	2,889	2,169	
Proportion of new hospital admissions with expected full effect of primary vaccination course (%)	24.8	19.2	18.0	13.9	12.6	10.7	
Proportion of new hospital admissions with expected full effect of revaccination (%)	39.9	48.2	53.6	60.1	66.1	68.7	
New hospital admissions per. 100,000 unvaccinated * (+ 12-year olds)	7.3	8.9	9.2	8.2	7.3	6.2	
New hospital admissions per. 100,000 with expected full effect of primary vaccination course * (+ 12-year-olds)	4.2	4.8	6.2	5.7	5.2	4.1	
New hospital admissions per. 100,000 with expected full effect of revaccination * (+ 12-year-olds)	2.6	3.7	4.7	5.4	5.5	5.1	
Number admitted on Monday morning	1,029	1,079	1,465	1,779	1,751	1,669	
Number admitted to intensive care on Monday morning	3.2	3.1	2.5	4.4	4.2	3.7	
Number of dead **	137	145	209	224	275	268	

* 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

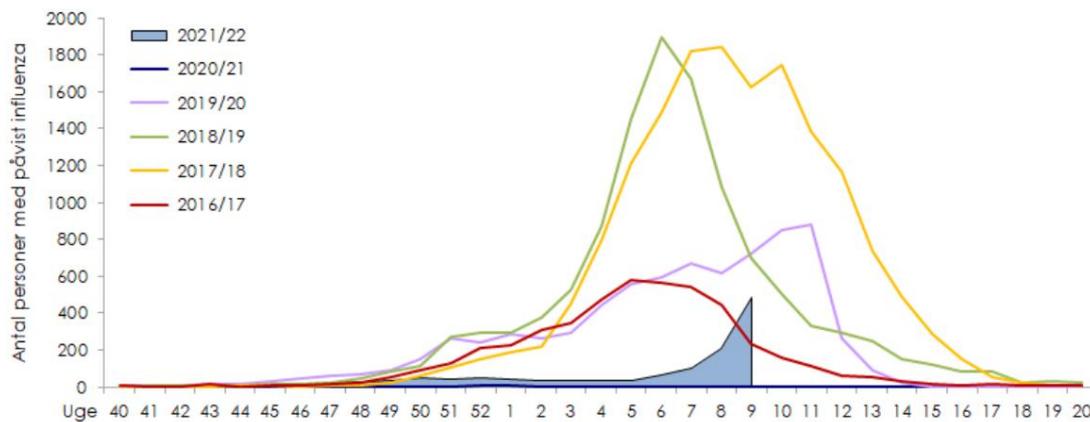
Flu	2022 week						Trend week 4-9
	4	5	6	7	8	9	
Incidence pr. 100,000 inhabitants	0.6	0.6	1.1	1.7	3.5	8.2	
Number of people tested	6,828	7,050	6,622	6,417	6,226	6,213	
Positive percentage	0.5	0.5	1.0	1.6	3.3	7.8	
Number of new admissions	6	6	9	28	36	76	

* 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 4-9
		4	5	6	7	8	9	
Incidence pr. 100,000 inhabitants	The capital	4829	4,070	3,795	2,889	1,910	1,396	
	Central Jutland	5078	6,054	6,567	4,879	3,014	2,249	
	North Jutland	5236	5,695	7,259	5,717	3,667	2,385	
	Zealand	5068	4,490	4,670	3,501	2,287	1,616 (1st most common)	
	Southern Denmark	5431	5,494	6,076	4,581	2,842 (2nd most common)	2,169	
Positive percentage	The capital	31.1	34.7	36.4	37.1	32.7	30.7	
	Central Jutland	31.0	39.1	43.6	44.3	39.5	39.4	
	North Jutland	30.2	36.5	44.0	43.7	41.8	38.2	
	Zealand	28.0	31.8	35.3	35.4	32.1	31.1	
	Southern Denmark	27.9	34.0	39.7	39.8	34.8	34.4	
R (newly infected)	The capital	0.9	0.9	0.8	0.8	0.7	0.8	
	Central Jutland	0.9	1.1	0.9	0.9	0.7	0.8	
	North Jutland	1.1	1.1	1.0	0.9	0.8	0.8	
	Zealand	0.9	0.9	0.8	0.7	0.7	0.6	
	Southern Denmark	1.0	1.0	0.9	0.9	0.7	0.8	
New hospital admissions	The capital	882	896	934	911	740	643	
	Central Jutland	295	375	546	538	494	420	
	North Jutland	117	195	274	349	339	273	
	Zealand	350	477	454	472	424	362	
	Southern Denmark	295	420	554	558	530	460	
	Unknown region	2	0	2	8	1	2	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

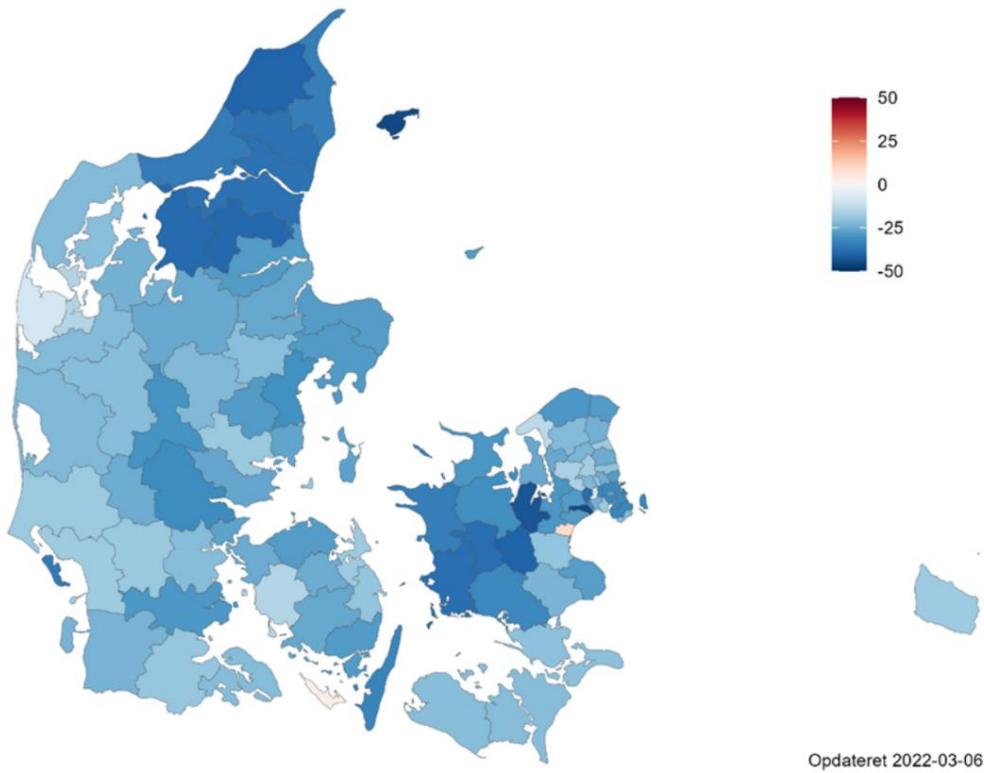




Figure 3. COVID-19: Weekly change in positive percentage, percentage
Figure 3. Covid-19: Percentage change in weekly positive percentage

Procentvis ændring ugentlig positivprocent over 7 dage

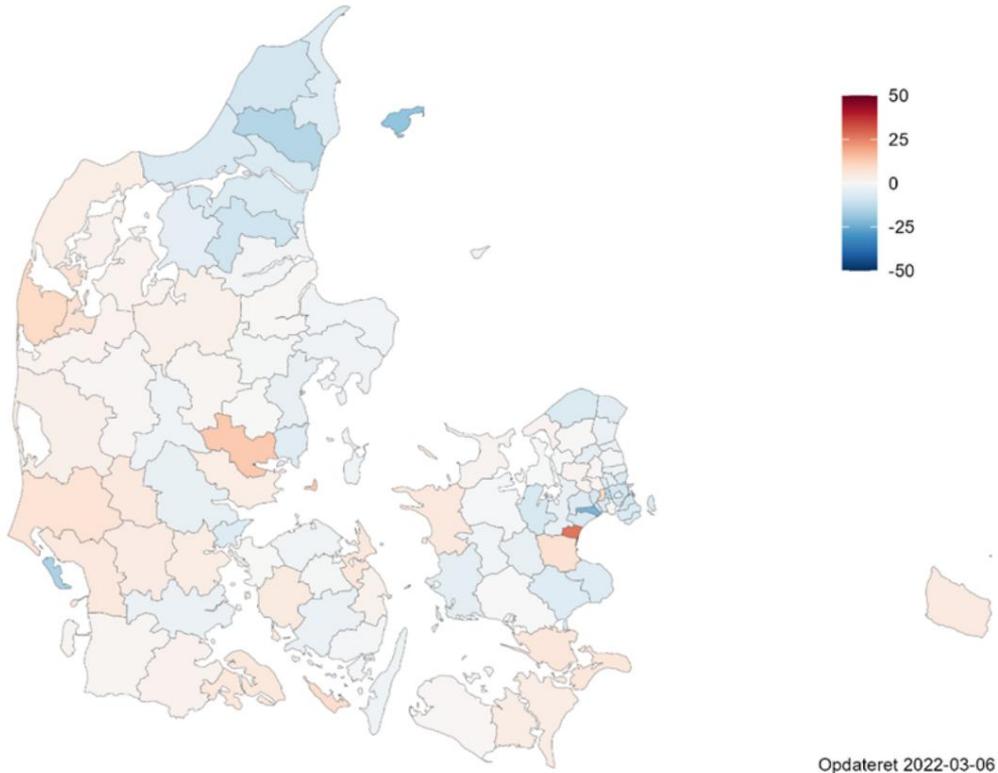
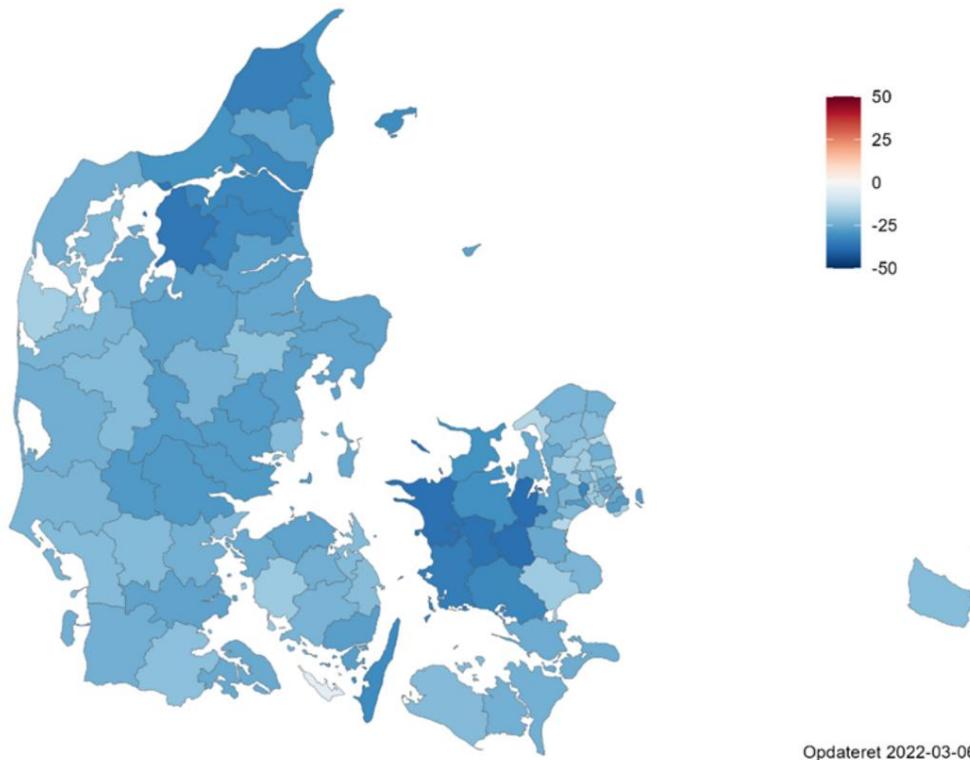




Figure 4. COVID-19: Weekly change in number of tests, percentage
Figure 4. Covid-19: Percentage change in weekly number of tests

Procentvis ændring i ugentlig antal test over 7 dage





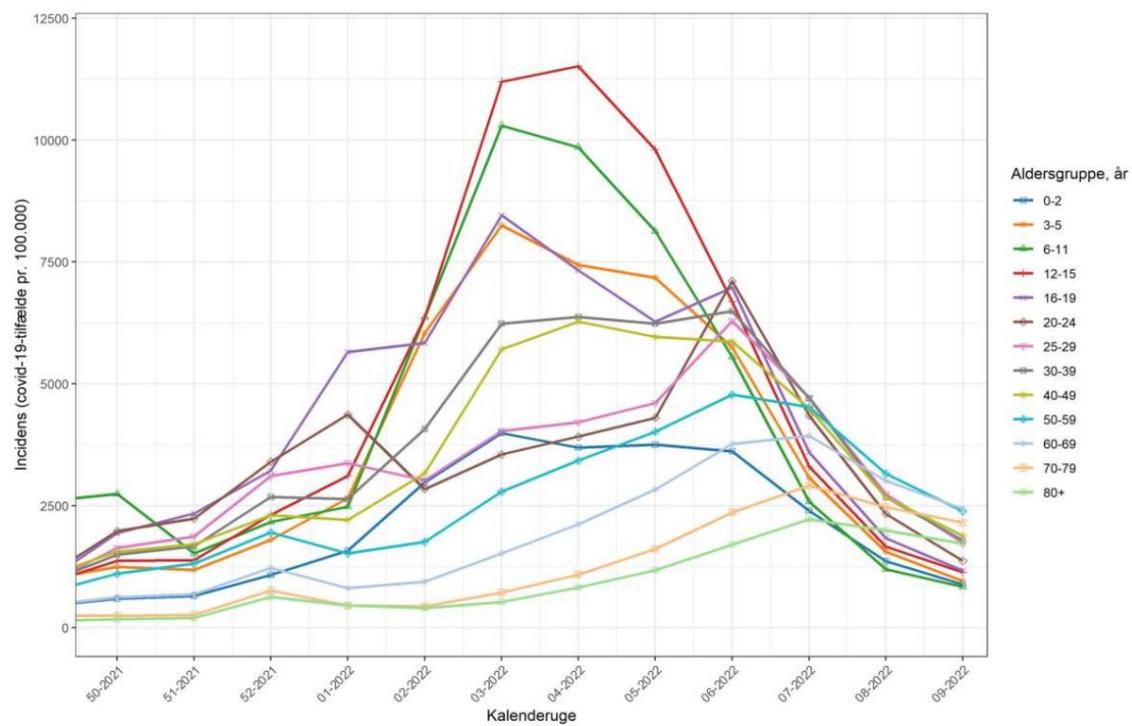
Age incidence

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

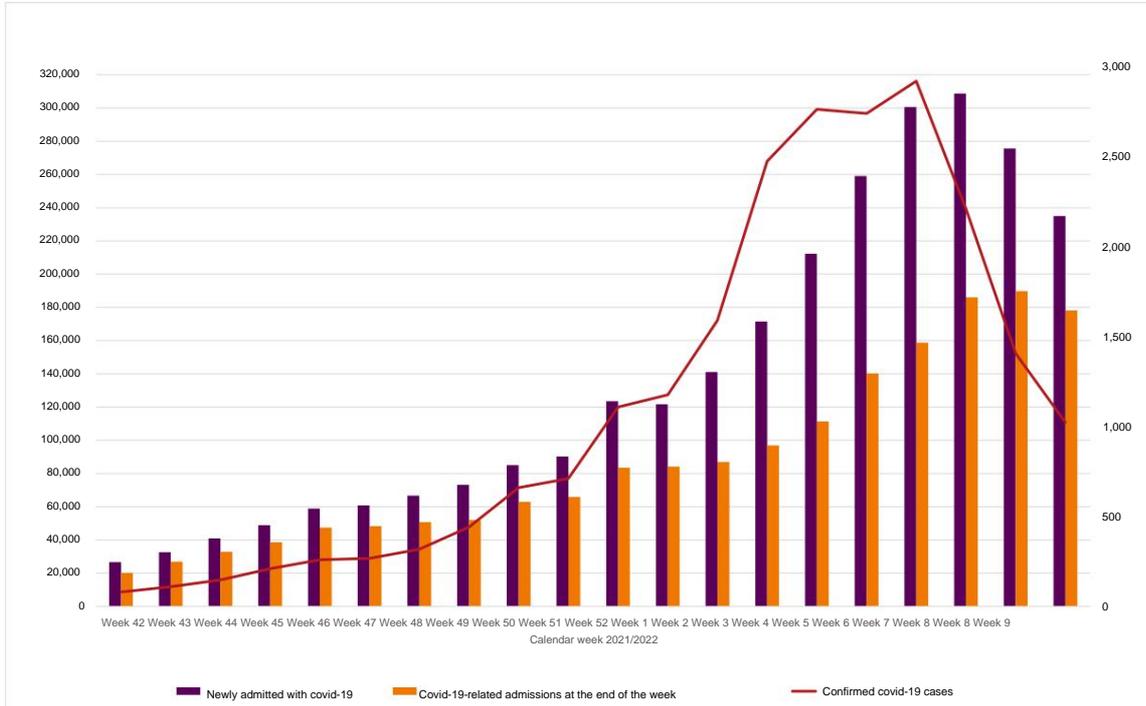
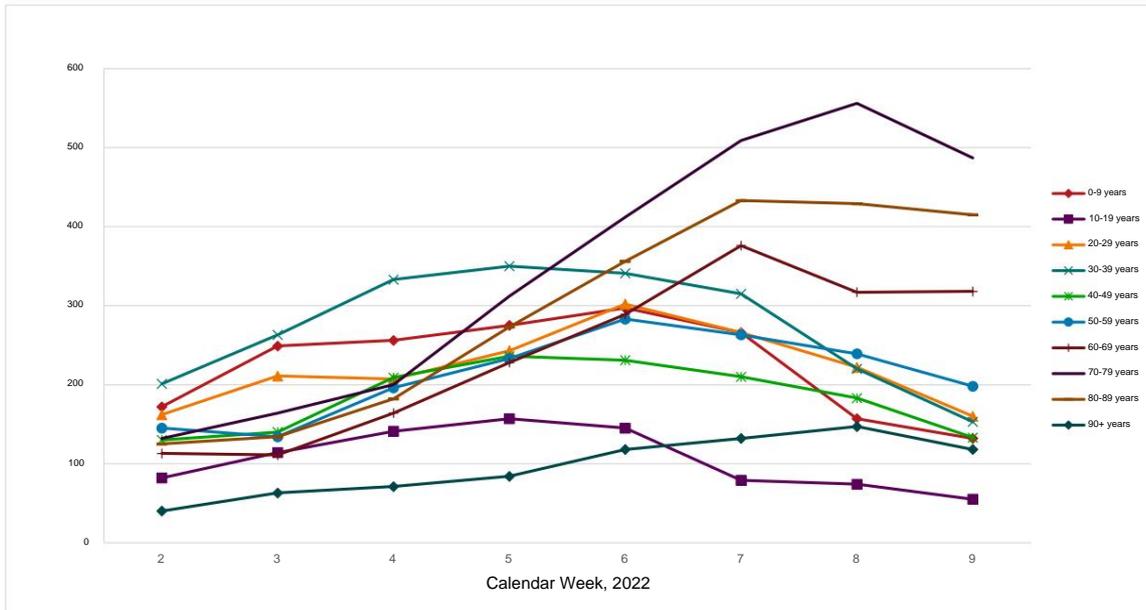




Figure 7. COVID-19: Weekly numbers of PCR-positive hospital admissions by age group
Figure 7. Covid-19: Weekly number of new admissions by age group





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 20th 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 20 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 20th 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 20, 2022

Diagnosis	2022 week						Trend
	2	3	4	5	6	7	
Covid-19 diagnosis	60%	55%	53%	50%	50%	52%	
Respiratory or observational diagnosis	4%	4%	5%	6%	5%	5%	
Second diagnosis	36%	40%	43%	45%	45%	44%	



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 20th 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 February 20, 2022

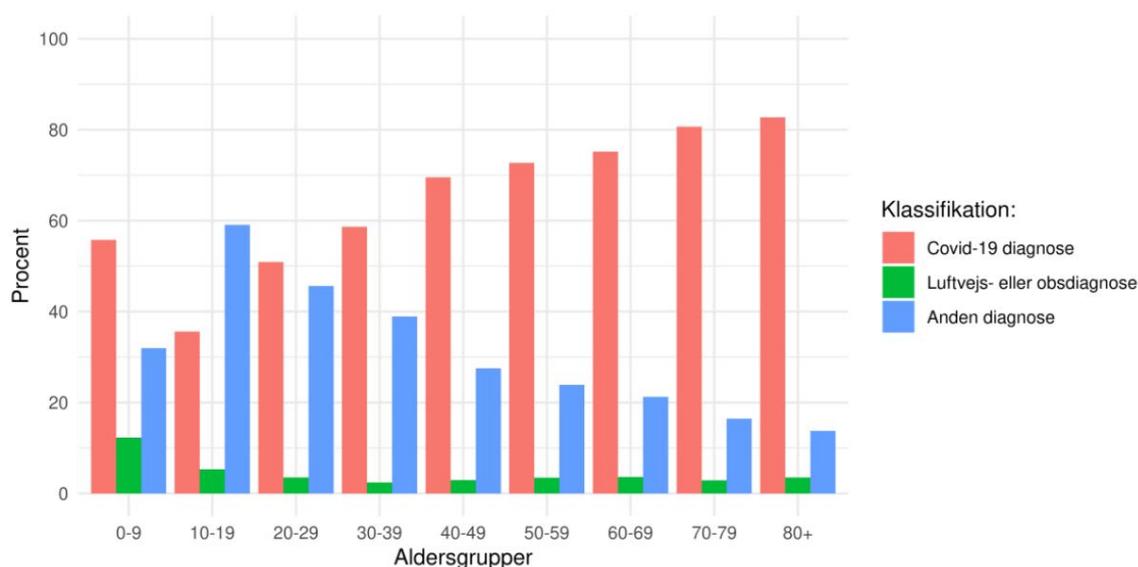


Table 6. COVID-19: Proportion of PCR-positive hospital admissions with a COVID-19-diagnosis (red), with a respiratory or tentative Covid-19 diagnosis (green), or with other diagnosis (blue), by age groups 0-59 and 60+ years old

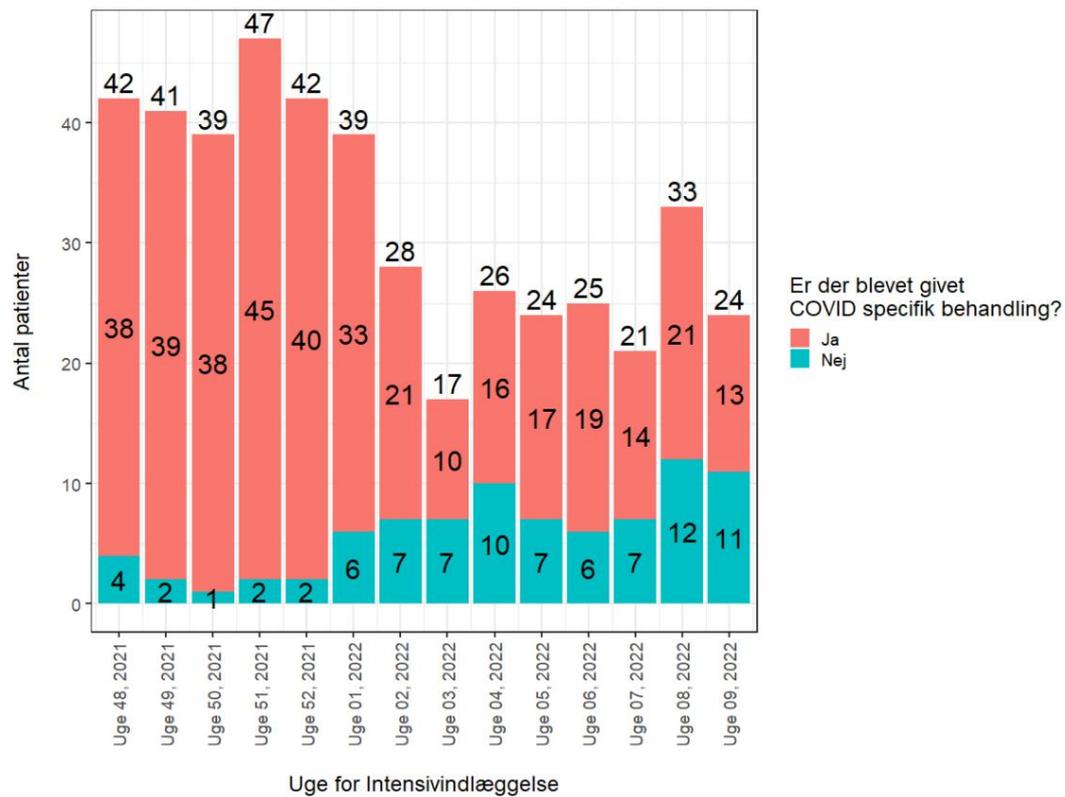
Table 6. Covid-19: Proportion of new admissions with positive SARS-CoV-2 samples admitted due to covid-19 diagnosis, or due to respiratory or obs covid-19 diagnosis, or due to other diagnosis, divided by age groups 0-59-year-olds and 60+ -year-olds

Diagnosis / age groups	2022 week							Trend
	2	3	4	5	6	7		
0-59-year-olds								
Covid-19 diagnosis	54.0%	49.4%	44.3%		39.9%	40.8%	41.1%	
Respiratory or observational diagnosis	4.0%	5.7%	4.9%		5.3%	4.8%	5.6%	
Second diagnosis	42.0%	44.8%	50.8%		54.7%	54.4%	53.3%	
60+ year olds								
Covid-19 diagnosis	71.0%	69.0%	67.1%		64.8%	63.3%	64.2%	
Respiratory or observational diagnosis	3.9%	2.7%	4.3%		6.5%	4.4%	3.5%	
Second diagnosis	25.1%	28.4%	28.6%		28.7%	32.3%	32.3%	



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 to 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

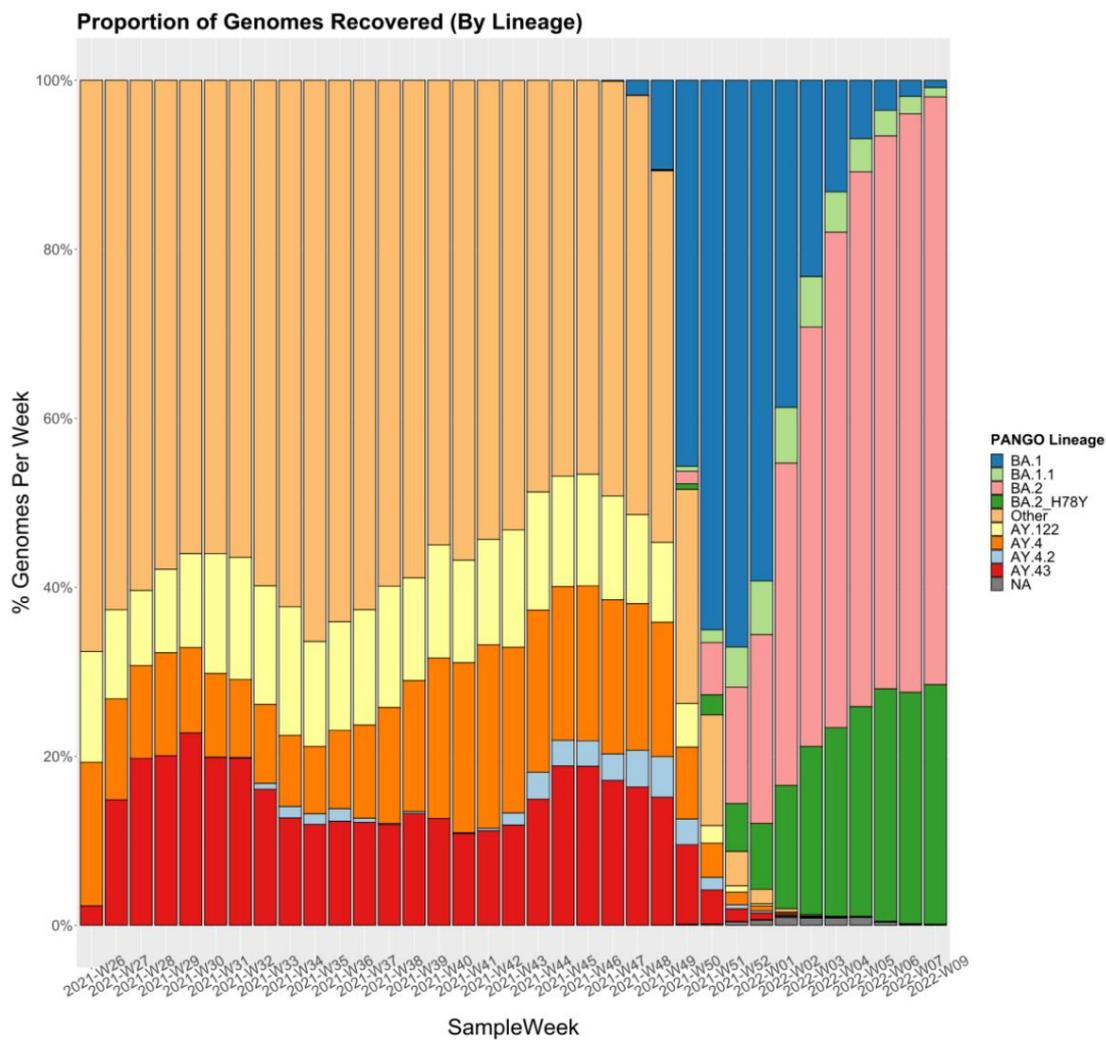




Table 7. COVID-19: The 20 most frequently observed sub (variants) based on whole-genome sequencing data for the last four weeks, 2022

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 week					
Lineage	WHO	6	7	8	9
BA.2	Omicron	8622 (65.44%)	9700 (68.47%)	9577 (69.33%)	3238 (69.54%)
BA.2_H78Y	Omicron	3624 (27.50%)	3878 (27.37%)	3854 (27.90%)	1320 (28.35%)
BA.1.1	Omicron	391 (2.97%)	285 (2.01%)	200 (1.45%)	52 (1.12%)
BA.1	Omicron	477 (3.62%)	277 (1.96%)	157 (1.14%)	40 (0.86%)
None		55 (0.42%)	21 (0.15%)	20 (0.14%)	5 (0.11%)
BA.3	Omicron	2 (0.02%)	4 (0.03%)	2 (0.01%)	0 (0.00%)
AY.4	Delta	2 (0.02%)	2 (0.01%)	1 (0.01%)	1 (0.02%)
AY.42	Delta	0 (0.00%)	0 (0.00%)	1 (0.01%)	0 (0.00%)
AY.78	Delta	0 (0.00%)	0 (0.00%)	1 (0.01%)	0 (0.00%)
AY.4.6	Delta	1 (0.01%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
B		2 (0.02%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Total		13176	14167	13813	4656

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.

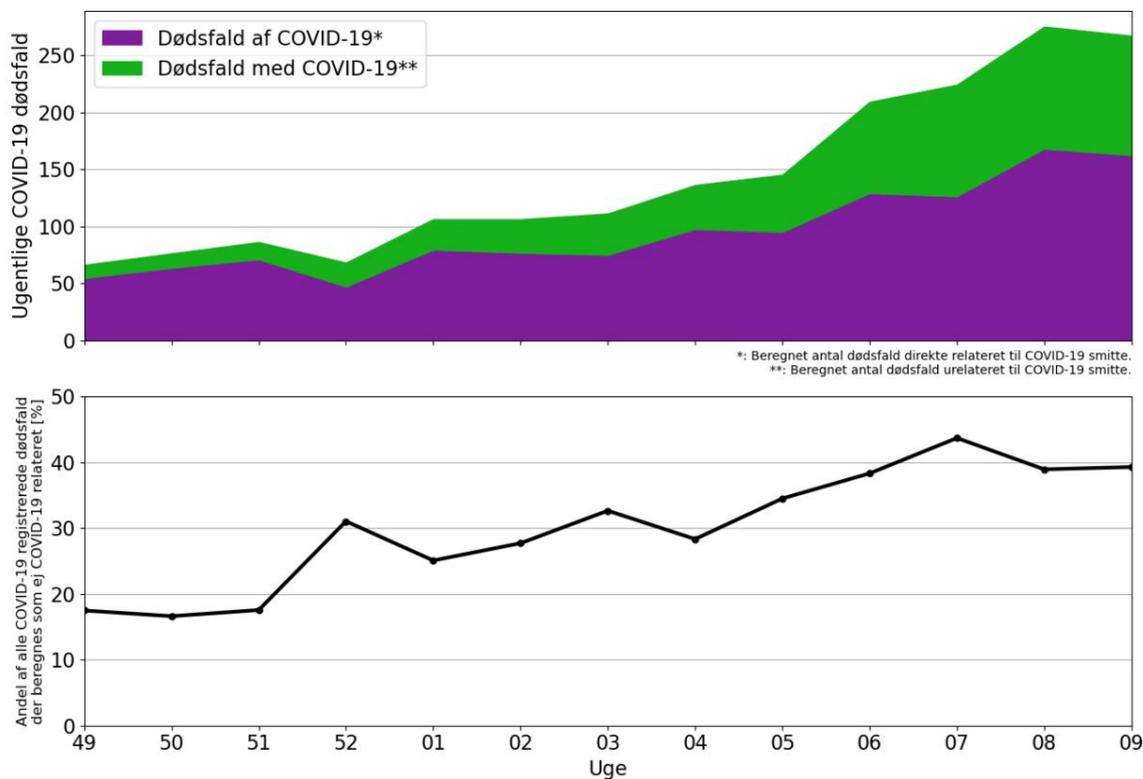


Mortality

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

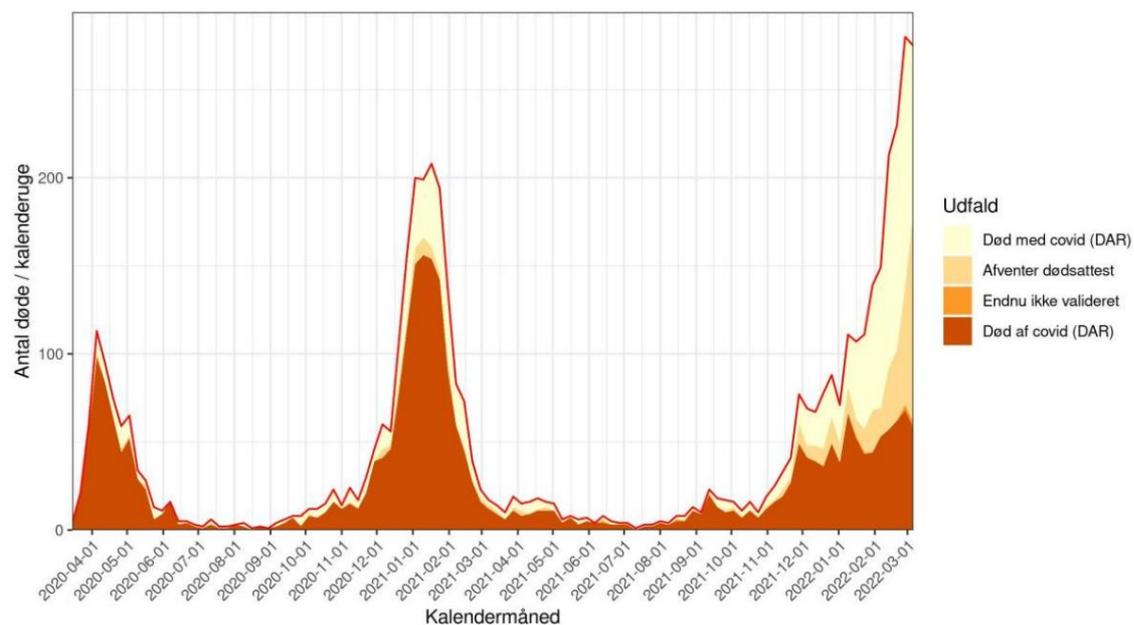
2021/2022, week	Deaths with positive covid-19 PCR test within 30 days, total	Deaths "of" covid-19	Deaths "with" covid-19	Proportion (%) of deaths "with" covid-19
49	66	54	12	17.5
50	76	63	13	16.6
51	86	71	15	17.6
52	68	47	21	31.0
	106	79	27	25.1
1	106	77	29	27.7
2	111	75	36	32.6
3 4	136	97	39	28.3
5	145	95	50	34.5
6	209	129	80	38.3
7	224	126	98	43.7
8	275	168	107	38.9
9	267	162	105	39.3

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

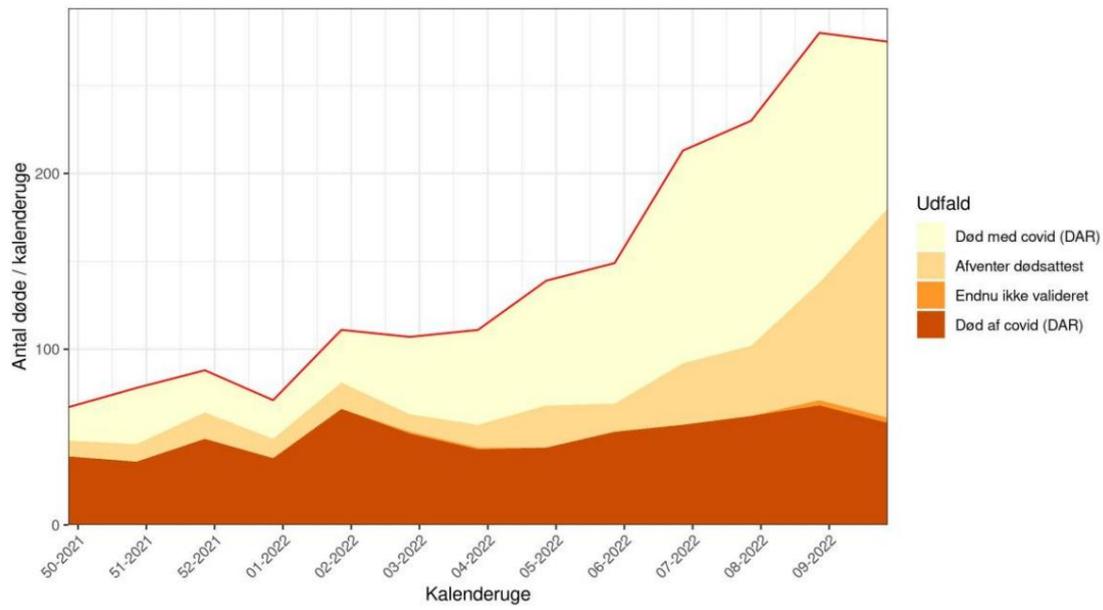


Note: Prepared on the basis of data from the Cause of Death Register (DAR) via the Danish Health and Medicines Authority



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

Nursing home

Table 10. COVID-19 at nursing homes

Table 10. Covid-19 in nursing homes

Covid-19, nursing home	2022 week				
	5	6	7	8	9
Confirmed cases among residents	1,547 in total common	2,055	2,302	2,002	1,700
Deaths among confirmed cases	61	88	99	134	116
Confirmed cases among residents with expected full effect after primary vaccination course	76	100	90	75	49
Confirmed cases among residents with expected full effect after revaccination	1,504	1,800 in total common	2,141	1,872 in total common	1,603
Nursing homes with confirmed cases	433	518	548	524	472



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 7		Week 8		Week 9	
	Number confirmed cases	Incidence per 100,000 in the group	Number of confirmed cases	Incidence per 100,000 in the group	Number of confirmed cases	Incidence per 100,000 in the group
Day care, day centers, home help mv.	3,225	6,183	2,230	4,275	1,531 in most common	2,935
Nursing homes, etc.	8,631 in most common	6,891	5,903	4,713	3,931	3,139
Social in total	11,856	6,683	8,133	4,524 in most common	5,462	3,079

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 7		Week 8		Week 9	
	Number of Incidents confirmed per 100,000 cases in the group	Incidence per 100,000 in the group	Number of confirmed cases	Incidence per 100,000 in the group	Number of confirmed cases	Incidence per 100,000 in the group
Health care and others	3,289	6,055	2,077	3,824 in most common	1,415 in most common	2,605
Hospitals	7,468	5,944	5,048	4,018	3,586 in most common	2,854
Total health	10,757	5,978	7,125	3,959	5,001	2,779

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 7		Week 8		Week 9	
	Number confirmed per 100,000 in coincidence	Incidence per 100,000 in the group	Number confirmed per 100,000 in coincidence	Incidence per 100,000 in the group	Number confirmed per 100,000 in coincidence	Incidence per 100,000 in the group
Institutions *	4,522	5,295	2,587 in most common	3,041	1,712	2,005

* 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 7		Week 8		Week 9	
	Number confirmed per 100,000 in coincidence	Incidence per 100,000 in the group	Number confirmed per 100,000 in coincidence	Incidence per 100,000 in the group	Number confirmed per 100,000 in coincidence	Incidence per 100,000 in the group
Primary school	5,367	4,534 in most common	3,161	2,706	2,363	2,023
Colleges and vocational schools	1,969	5,154	1,191	3,118	928	2,422 in most common



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

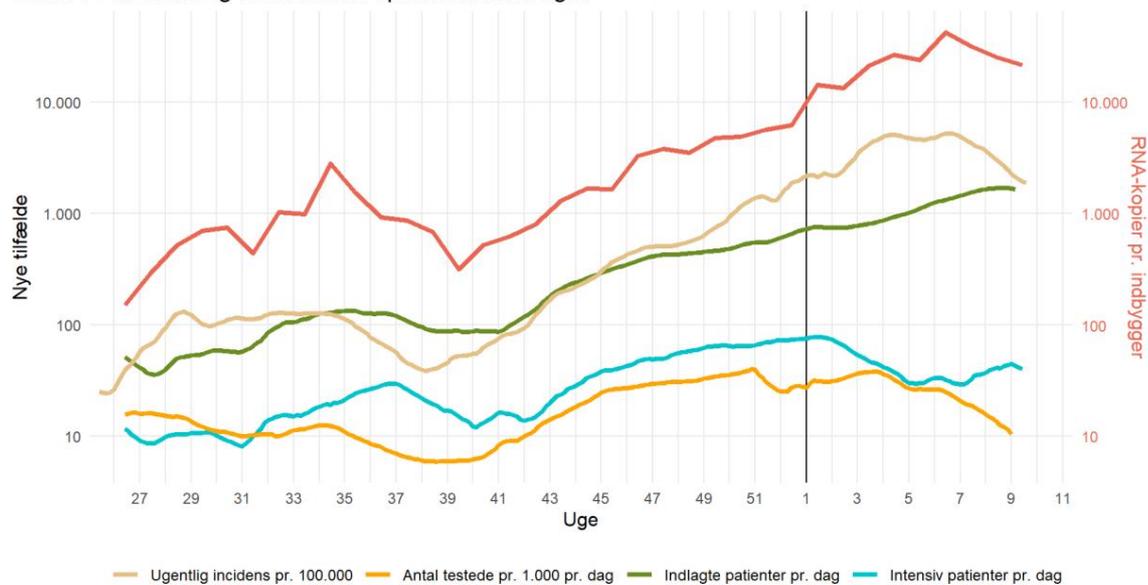
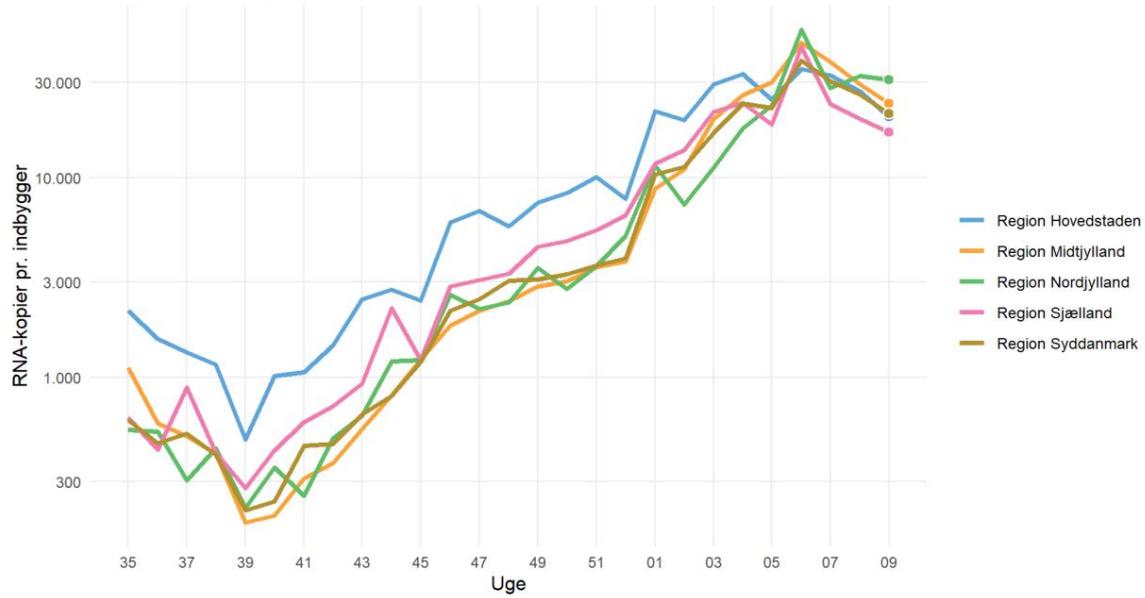




Figure 16. COVID-19. Results from waste-water surveillance by region, 2021/2022

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 suspected of being infected with covid-19 per week over the past 5 months. The gray color indicates the confidence interval for the calculation (dark gray 95%, light gray 99%).

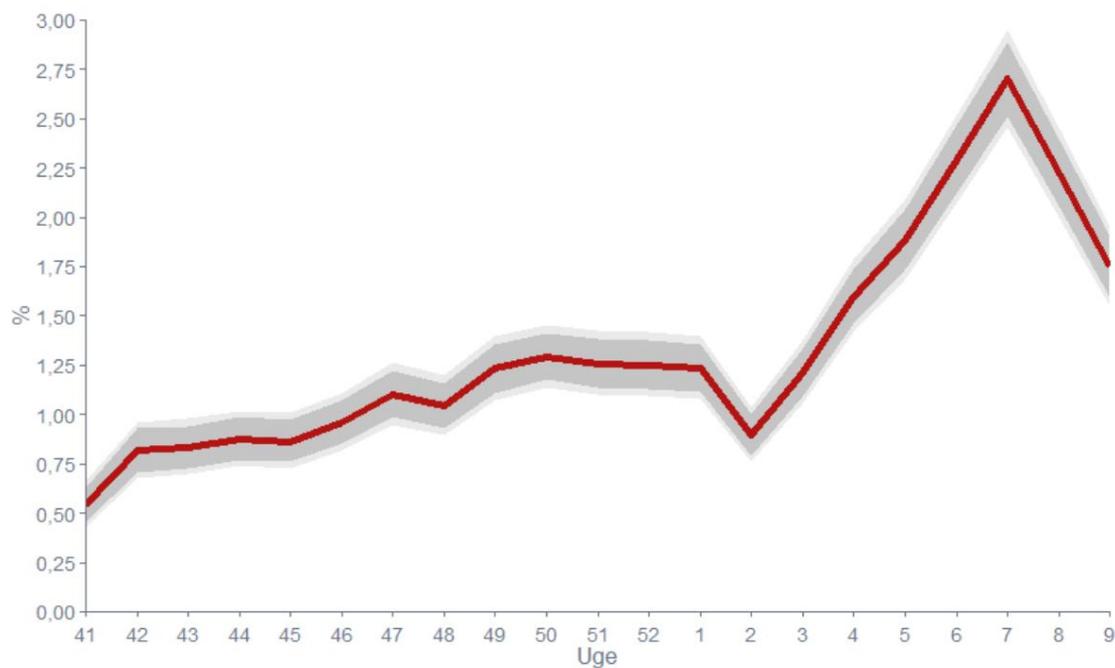
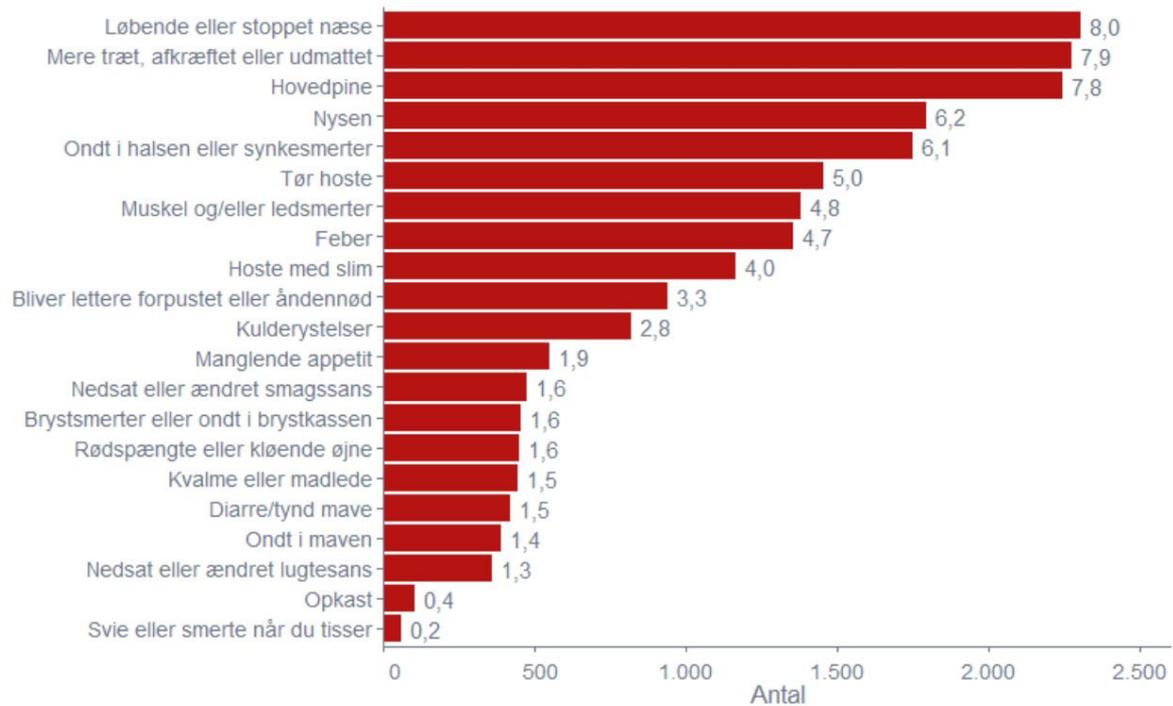




Figure 18. COVID-19: Symptoms reported to COVIDmeter by number in week 9, 2022.

Figure 18. Covid-19: Symptoms reported to COVIDmeter by number in week 9, 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.

Completely vaccinated is defined as a completed primary vaccination program, ie. people who have been revaccinated will be included in the group of fully vaccinated. Expected full effect of vaccination is defined as 14 days after completion of vaccination for all vaccine types.

Please note that in the section Breakthrough infections, two figures are shown, where the value of the y-axes is very different.

Special staff groups

The variable 'Number of confirmed cases' is time-independent of 'Number of cases without vaccination' and is tested positive. ~~Number of cases with expected full effect of vaccination~~ because persons who are tested positive, while vaccination adherence is the current vaccination status at the time of enumeration. The number of people with status as 'Number of cases without vaccination' and 'Number of cases with expected full effect of vaccination', respectively, may therefore change retroactively, which is why there may be deviations for the individual weeks if statements from different weeks are compared. Comparison of weekly development may therefore be subject to uncertainty, and the figures for 'Number of confirmed cases' and 'Number of cases with expected full effect of vaccination' are not an expression of breakthrough infections.

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.

School outbreaks

Every Tuesday, an overview of possible outbreaks in schools is published on SSI's website . Here you will also find documentation and definitions.



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](#)