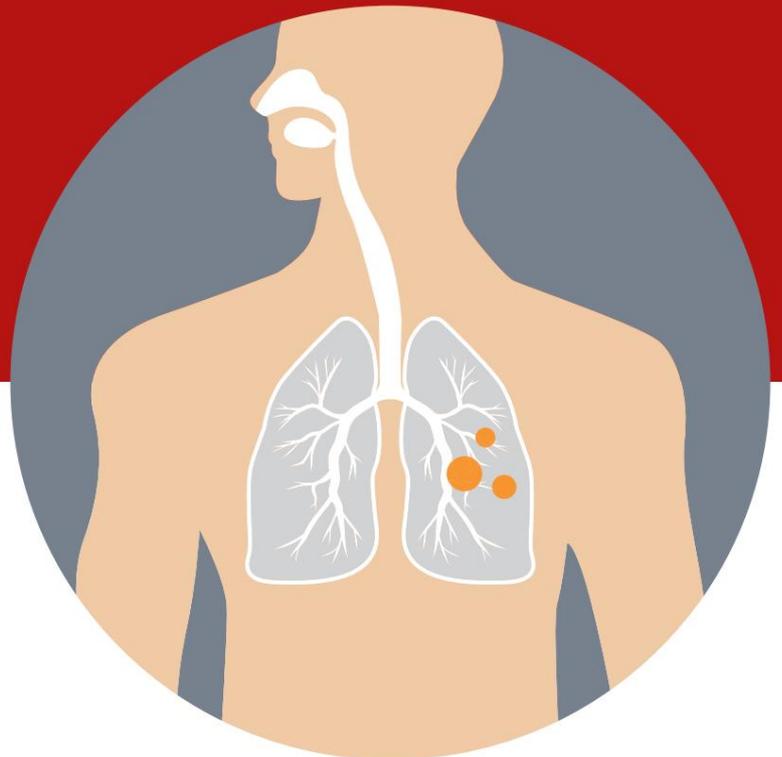


# Weekly trends: covid-19 and other respiratory infections

Week 9 | 2022





# **The epidemiological development of covid-19 and other respiratory infections in Denmark from week 7 to week 8**

Prepared March 1, 2022

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## Overall assessment

On a national level case numbers have decreased by 36% between weeks 7 and 8. The decrease is seen in all five regions and is accompanied by a decline in the rate of test positive. Test activity in week 8 has decreased to approximately 1/3 of the activity recorded in week 3. In wastewater samples, a decrease in the concentration of SARS-CoV-2 is seen on a national level, with the exception of the North Denmark Region that sees an increase.

There is a decrease in the number of new admissions of 11% in week 8, and a stabilization in the number of admissions on intensive care.

Case numbers continue to decrease in all age groups, with the highest number recorded in week 8 among 50 to 59 year olds. The number of new hospital admissions has increased by 11% in week 8, with a relatively stable numbers of admissions in the intensive care units as well as in the proportion receiving COVID-specific treatment among admissions in the intensive care units. In spite of an overall decline the number of new hospital admissions, an increase in hospital admissions among the older population groups (70-79 and 90+ years of age) has been recorded in week 8. The proportion of patients with a positive SARS- CoV-2 test hospitalized because of a COVID-19 diagnosis was stable at 50% in week 6, still with a higher proportion among the older age groups above 60 years of age (65% in week 5).

The number of COVID-related deaths has increased in week 8 compared to week 7. The latest probability estimates suggest that the proportion of deaths caused by COVID-19 has increased to 65% in week 8. There are still signs of slight excess mortality, especially in the older population of 85 years and above - a tendency also described in the two previous reports.

Case numbers are still expected to decline across the country in the next weeks, despite the development in week 7 and 8, which is partly influenced by the winter holidays (weeks 7 and 8 in Denmark) and lower test activity levels. Nonetheless, the higher case numbers in the older population groups may still increase COVID-19 related hospitalization numbers.



## Summary

- The number of new cases with covid-19 has decreased by 36% between week 7 and week 8, corresponding to the incidence in week 8 having decreased to 2,596 cases per 100,000 inhabitants. The positive percentage has decreased from 40% in week 7 to 36% in week 8. There is still a decrease in both the number of PCR tests (29%) and in antigen tests (34%).
- The incidence is still highest in the North Jutland Region (3,667 per 100,000 inhabitants), but declining incidences are seen in all five regions from week 7 to week 8.
- The positive percentage is declining in all five regions, which is seen in parallel with a decrease in the number of tests. Week 8 shows the highest positive percentage in the North Jutland Region (42%).
- At the national level, the incidence is now highest among the 50-59-year-olds (3,160 per 100,000 inhabitants) and the 60-69-year-olds (3,014 per 100,000 inhabitants). A decrease is seen in all age groups.
- The number of new admissions related to covid-19 has dropped to 2,544 in week 8, but an increase is seen among the + 70-79-year-olds and the + 90-year-olds. The 70-79-year-olds remain the age group that makes up 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) is stable from week 5 to week 6 (50%). In week 6, the proportion admitted with a covid-19 diagnosis is 41% for the 0-59 year olds and 65% for the 60+ year olds.
- Data from the Danish covid-19 intensive database show that the proportion of covid-19-related admissions to intensive care where covid-19-specific treatment has been given are 67% in week 7 and 68% in week 8. Link: [Danish Intensive Database](#).
- The number of covid-19-related deaths has increased from 224 in week 7 to 263 in week 8.
- The excess mortality has been at a normal level from week 2 up to and including week 5. From week 6 onwards, there are signs of a low excess mortality, especially among the elderly aged 85+. However, the mortality rates of recent weeks must be taken with reservations due to post-registration.
- In week 8, it is estimated on the basis of probability calculations that 35% of the covid-19-related deaths occurred for a reason other than covid-19. This means that there is now an estimated increase in the proportion of covid-19-related deaths that occur due to covid-19.



- As in recent weeks, this week's report contains inventories of validated causes of death among registered covid-19-related deaths both for the entire pandemic and for the past 8 weeks. The inventory for the entire pandemic shows 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 cause other than covid-19 have increased to over 60% 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 45% in week 8.
- Infection among nursing home residents has decreased from 2,302 cases in week 7 to 2,002 in week 8. There were 134 deaths among residents with covid-19 in nursing homes this week 8 compared to 99 in week 7.
- Infection among employees in the health, social and education sectors continues to decline from week 7 to week 8.
- The share of BA.2 has increased slightly to approx. 97% of all cases in week 8 compared to 96% in week 7. A stable proportion of BA.2 cases are BA.2 with the mutation H78Y. It should be noted that the latest figures of variants for week 8 should be interpreted with reservations, as the number of sequences is still low.
- In week 8, a decrease in SARS-CoV-2 concentration in the wastewater is seen at national level. Divided into regions, there is also a decrease in SARS-CoV-2 concentration in the wastewater, phrased in Region North Jutland, where a small increase has been observed.
- In week 8, there is 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. However, the incidence of influenza is still at a very low level, and continues below what is normally seen at this time of the flu season.



## Overall assessment

The infection has decreased further between week 7 and week 8 corresponding to 36%. The decrease in infection occurs across the country, and is accompanied by a decrease in positive percentage, which can also be seen in all 5 regions. The test activity is steadily declining, and in week 8 is down to just over 1/3 of the activity in week 3. There has been a decrease in the concentration of SARS-CoV-2 in the wastewater, with the exception of an increase in the North Jutland Region.

The infection decreases in all age groups, and the highest infection was in week 8 among the 50-69 year olds. There is a decrease in the number of new admissions of 11% in week 8, and a relatively stable development in the number of admissions to intensive care as well as in the proportion of intensive care recipients receiving covid-specific treatment. Despite a decrease in the total number of admissions in week 8, there is an increase in the number of admissions among the elderly corresponding to the age groups 70-79 years and 90+ years. At week 6, the proportion of patients admitted due to a covid-19 diagnosis was stable at 50%, with the proportion admitted due to a covid-19 diagnosis still being higher among the older age groups over 60 years, corresponding to 65% in week 5.

The number of covid-related deaths has increased in week 8 compared to week 7, where the latest probability calculations indicate that the proportion of deaths estimated to be caused by covid-19 has increased to 65% in week 8. There are still signs on a low overall excessively, but especially among the elderly over 85 years, as also described in the last two trend reports.

The infection is expected to continue to fall further across the country over the coming weeks, despite the fact that the development in week 7 and week 8 is to a certain extent assessed to be affected by the winter holidays and the declining test activity. However, there is still a risk that the infection among the older age groups may lead to derived covid-19-related admissions.

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

*Note: Please note that "Incidence per 100,000 inhabitants", "Confirmed cases (PCR)", "New hospital admissions" and "Incidence per 100,000 inhabitants" from week 4 include reinfections, so there will be a difference of approx. 5% when compared to previous weeks.*



## 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 3-8
	3	4	5	6	7	8	
Incidence pr. 100,000 inhabitants 4,572		5,105	5,061	5,395	4,081	2,065 in most common	
Incidence pr. 100,000 with expected full effect of primary vaccination course * (+ 12-year-olds)	6,753	7,254	7,180	7,395	4,864	2,047 in most common	
Incidence pr. 100,000 with expected full effect of revaccination * (+ 12-year-olds)	3095	3892	4551	5,726	5,057	2,043 in most common	
Incidence pr. 100,000 unvaccinated * (+ 12-year-olds)	5,939	6,037	5,490	5,596	3,807	2,186	
R (newly infected)	1.2	1.0	1.0	0.9	0.9	0.7	
Number of tests performed (PCR)	1,539,900	1,305,989	1,088,298	1,023,574	766,439	546,574	
Confirmed cases (PCR)	267,948	299,212	296,630	316,181	239,265	152,217	
Proportion of confirmed cases with expected full effect of primary vaccination course (%)	38.2	32.0	27.1	21.6	16.4	13.4	
Proportion of confirmed cases with expected full effect of revaccination (%)	31.7	38.6	47.6	57.3	66.5	71.5	
Positive Percentage (PCR)	24.8	29.7	35.4	39.8	40.1	35.8	
Number of tests performed (antigen)	1,682,121	1,249,869	819,679	641,090	343,289	227,407	
Confirmed cases (antigen, PCR confirmed) **	56,788	54,202	47,100	48,378	30,993	-	
Positive percentage (antigen)	3.4	4.3	5.8	7.5	9.0	-	

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.

Note that vaccinated children aged 5-11 years are not yet included with vaccination status in data for GDPR reasons.

Note: Please note that "Incidence per 100,000 inhabitants", "Confirmed cases (PCR)", "New hospital admissions" and "Incidence per 100,000 inhabitants" from week 4 includes reinfections, which is why there will be a difference of approx. 5% when compared to previous weeks.

\* The population for calculating incidents is described in the data base under the section "Breakthrough infections".

\*\* 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 3-8
	3	4	5	6	7	8	
New hospital admissions	1,583	1,959	2,391	2,774	2,349 in most common	2,549 in most common	
Proportion of new hospital admissions with expected full effect of primary vaccination course (%)	28.7	24.8	19.2	18.0	13.9	12.6	
Proportion of new hospital admissions with expected full effect of revaccination (%)	34.3	39.9	48.2	53.6	60.1	66.1	
New hospital admissions per. 100,000 unvaccinated* (+ 12-years old)	6.7	7.3	8.9	9.2	8.2	7.3	
New hospital admissions per. 100,000 with expected full effect of primary vaccination course* (+ 12-year-olds)	3.2	4.2	4.8	6.2	5.7	5.2	
New hospital admissions per. 100,000 with expected full effect of revaccination* (+ 12-years old)	2.0	2.6	3.7	4.7	5.4	5.5	
Number admitted on Monday morning	894	1,038 in most common	1,247 in most common	1,465	1,717 in most common	1,751	
Number admitted to intensive care on Monday morning	4.3	3.2	3.1	2.5	4.4	4.2	
Number of dead**	111	137	145	209	224	263	

Note to Table: Please note that "Incidence per 100,000 inhabitants", "Confirmed cases (PCR)", "New hospital admissions" and "Incidence per 100,000 inhabitants" from week 4 includes reinfections, which is why there will be a difference of approx. 5% when compared to previous weeks.

\* The population for calculating incidents is described in the data base under the section "Breakthrough infections".

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

**Table 3. COVID-19: Key numbers and trends for cumulative vaccination, weekly, 2022**

**Table 3. Covid-19: Key figures and trends for vaccination adherence, by week, 2022**

Covid-19	2022						Trend week 3-8
	3	4	5	6	7	8	
Number of people who have received the first revaccination	3,509,732	3,569,310	3,596,374	3,614,387	3,624,211	3,632,532	
Revaccination (%)	59.8	60.8	61.2	61.5	61.7	61.8	



## Other respiratory diseases

Data is updated backwards.

**Table 4. Influenza: Key numbers and trends, weekly, 2022**

**Table 4. Influenza: key figures and trends \*, broken down by week, 2022**

Flu	2022 week						Trend week 3-8
	3	4	5	6	7	8	
Incidence pr. 100,000 inhabitants	0.6	0.6	0.6	1.1	1.7	3.3	
Number of people tested	7,454	6,828	7,050	6,619	6,415	6,180	
Positive percentage	0.5	0.5	0.5	1.0	1.6	3.1	
Number of new admissions	10	6	6	9	28	32	

\* 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.



## 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 5. COVID-19: Key numbers and trends by region, weekly, 2022**

**Table 5. Covid-19: Key figures and trends for regions, by week, 2022**

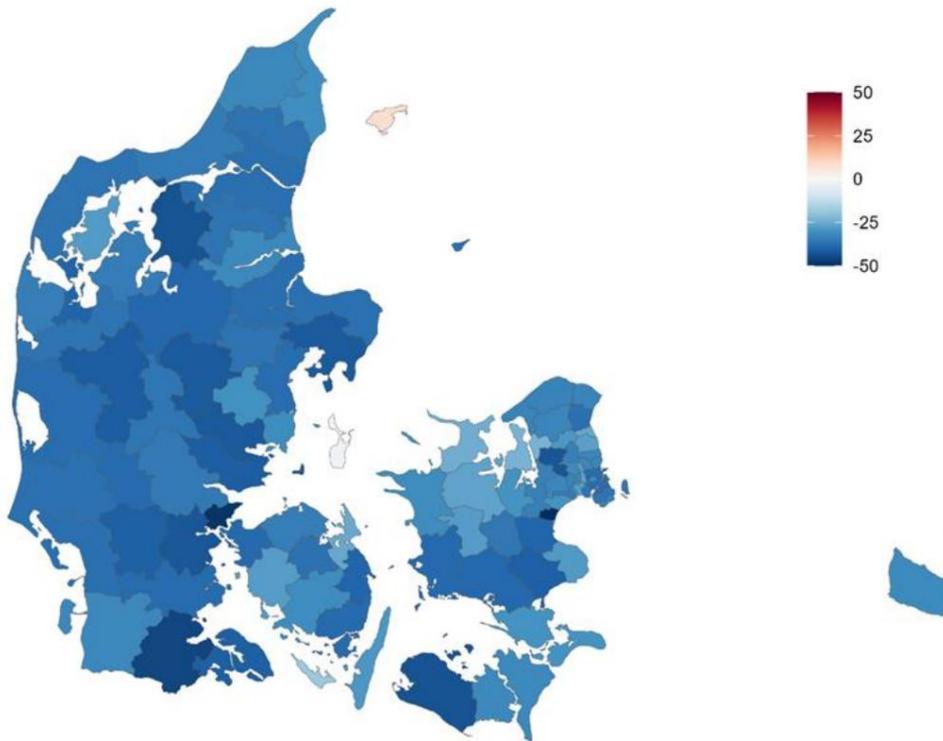
Covid-19	Region	2022 week						Trend week 3-8
		3	4	5	6	7	8	
Incidence pr. 100,000 inhabitants	The capital	5005 4,829		4,070 3,795		2,889	1,910	
	Central Jutland	4376 5,078		6,054 6,567		4,879	3,014	
	North Jutland	3825 5,236		5,695 7,259		5,719 most common	3,667	
	Zealand	4446 5,068		4,490 4,670		3,501	2,287	
	Southern Denmark	4484 5,431		5,494 6,076		4,581 6 most common	2,840 6 most common	
Positive percentage	The capital	28.6	31.1	34.7	36.4	37.1	32.7	
	Central Jutland	24.3	31.0	39.1	43.6	44.3	39.5	
	North Jutland	22.5	30.2	36.5	44.0	43.7	41.8	
	Zealand	23.8	28.0	31.8	35.3	35.4	32.1	
	Southern Denmark	22.1	27.9	34.0	39.7	39.8	34.8	
R (newly infected)	The capital	1.1	0.9	0.9	0.8	0.8	0.7	
	Central Jutland	1.2	0.9	1.1	0.9	0.9	0.7	
	North Jutland	1.2	1.1	1.1	1.0	0.9	0.8	
	Zealand	1.1	0.9	0.9	0.8	0.7	0.7	
	Southern Denmark	1.1	1.0	1.0	0.9	0.9	0.7	
New hospital admissions	The capital	718	882	896	934	911	740	
	Central Jutland	228	295	375	546	538	494	
	North Jutland	114	117	195	274	349	339	
	Zealand	290	350	477	454	472	424	
	Southern Denmark	219	295	420	554	558	530	
	Unknown region	14	20	28	12	21	17	



### Growth rates in the municipalities

**Figure 1. COVID-19: Weekly change in incidence, percentage**  
**Figure 1. Covid-19: Percentage change in weekly incidence**

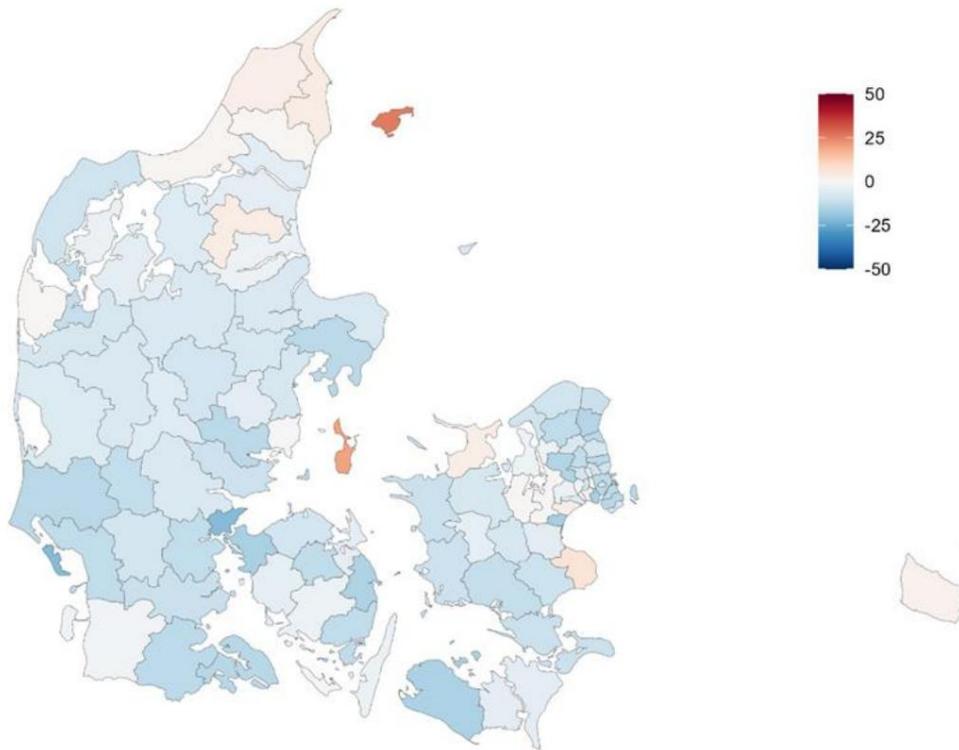
Procentvis ændring i ugentlig incidens over 7 dage





**Figure 2. COVID-19: Weekly change in positive percentage, percentage**  
**Figure 2. Covid-19: Percent change in weekly positive percentage**

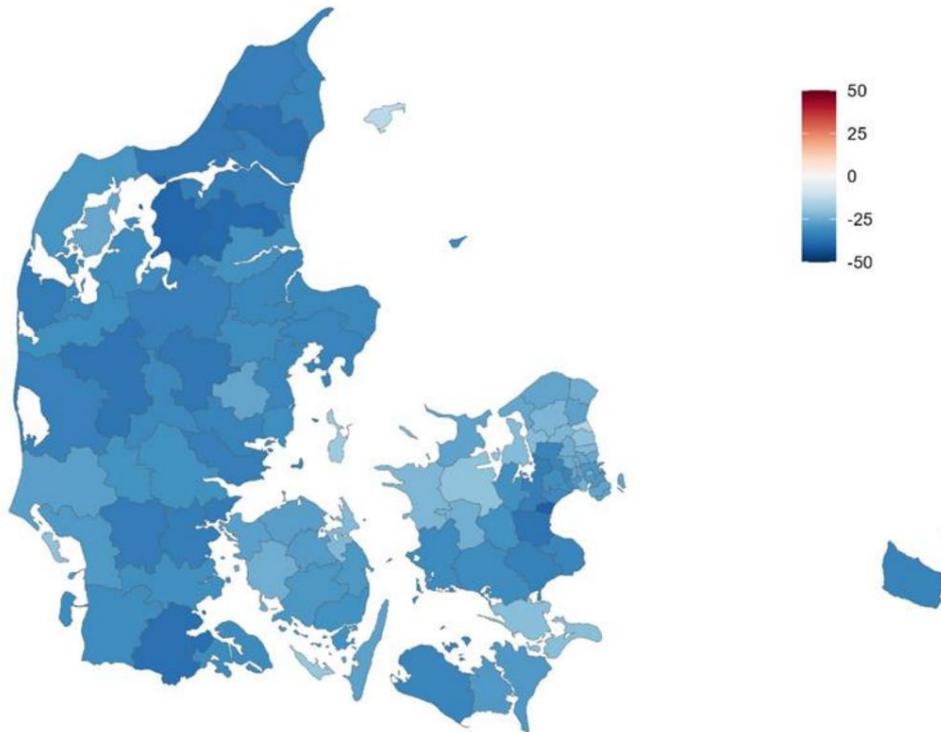
Procentvis ændring ugentlig positivprocent over 7 dage





**Figure 3. COVID-19: Weekly change in number of tests, percentage**  
**Figure 3. Covid-19: Percentage change in weekly number of tests**

Procentvis ændring i ugentlig antal test over 7 dage





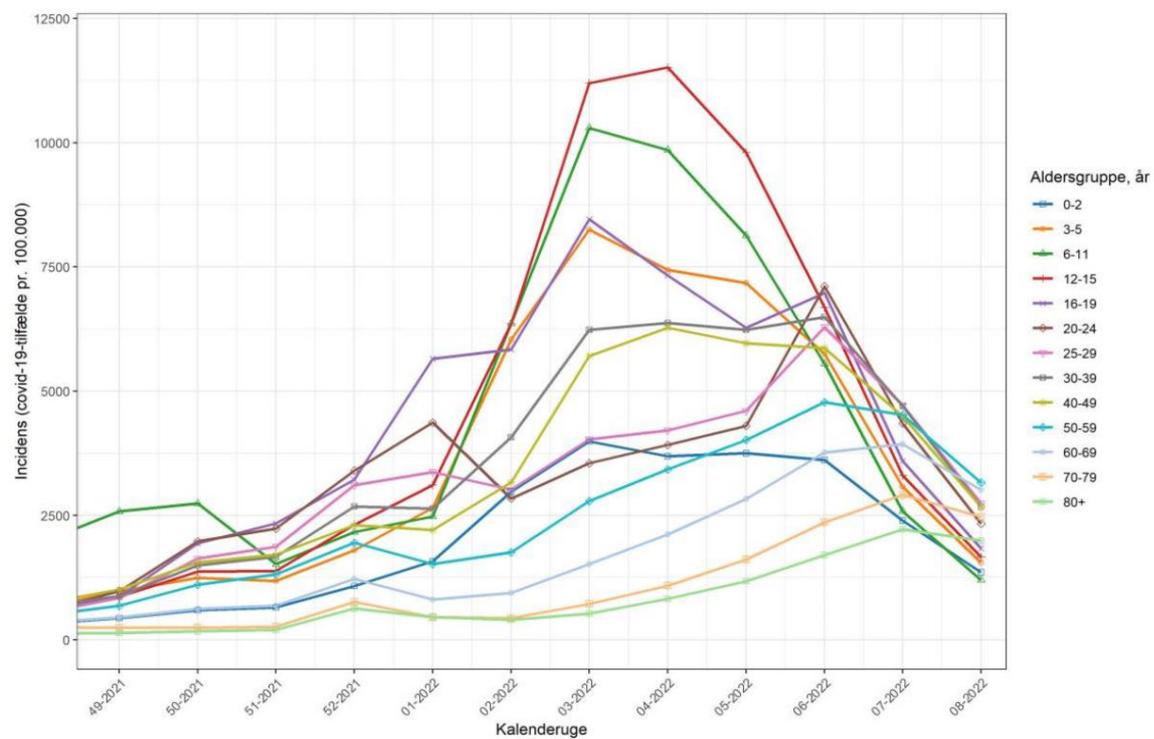
## Age incidence

Data is updated backwards.

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

**Figure 4. COVID-19: Age-specific incidence per 100,000 inhabitants**

**Figure 4. Covid -19: Age-specific incidence per 100,000 inhabitants**



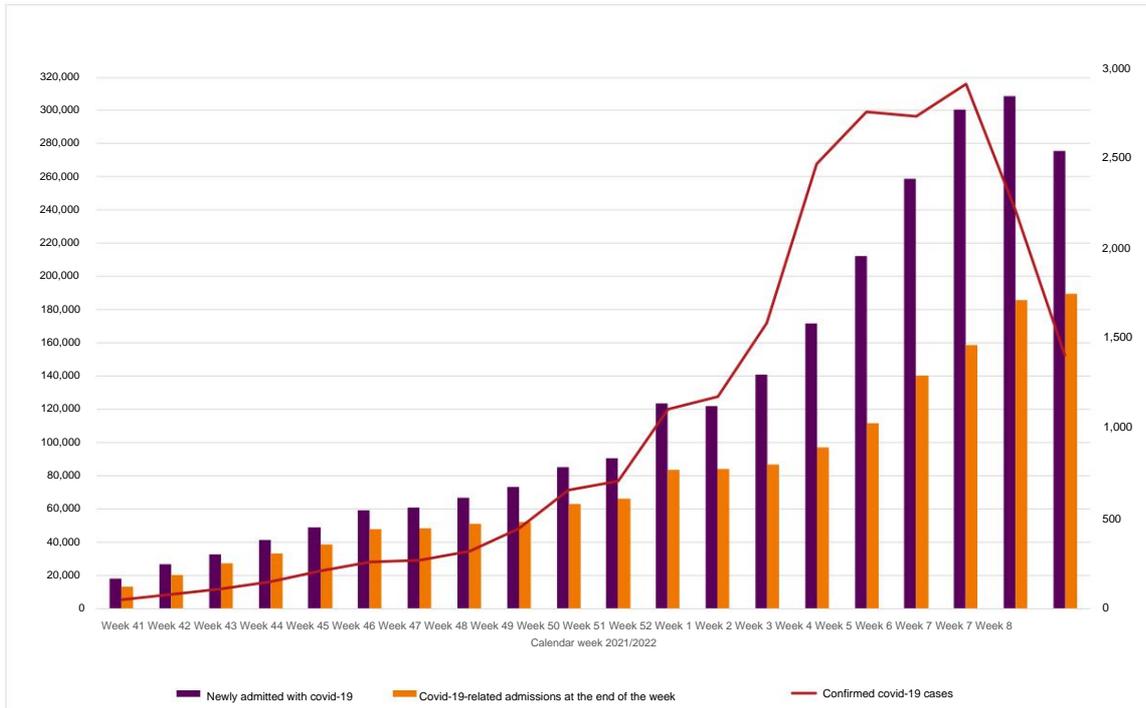


## Newly admitted

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

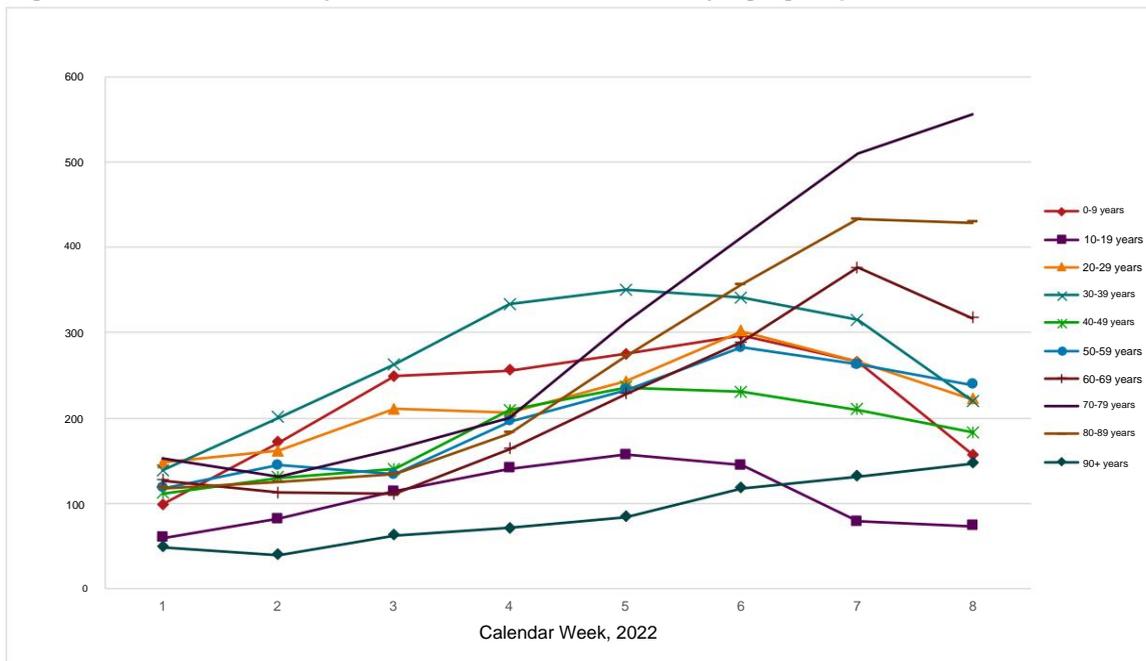
**Figure 5. COVID-19: PCR-positive hospital admissions (purple), PCR-positive patients in hospital on Monday morning (orange) and confirmed (PCR-positive) cases in population (red)**

**Figure 5. Covid-19: Newly admitted, hospitalized Monday morning and confirmed cases**





**Figure 6. COVID-19: Weekly numbers of PCR-positive hospital admissions by age group**  
**Figure 6. Covid-19: Weekly number of new admissions by age group**





The following figures in this section are updated retrospectively.

**Figure 7. 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 13th 2022**

**Figure 7. 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 13 February 2022**

**THERE IS NO FIGURE THIS WEEK DUE TO A TECHNICAL ERROR. HOWEVER, PLEASE SEE LATEST NUMBERS IN TABLE 6.**

**NO FIGURE THIS WEEK PGA. TECHNICAL ERROR. SEE TABLE 6 FOR THE SPECIES OF RECENT WEEKS.**

**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, June 1st 2020 to February 13th 2022**

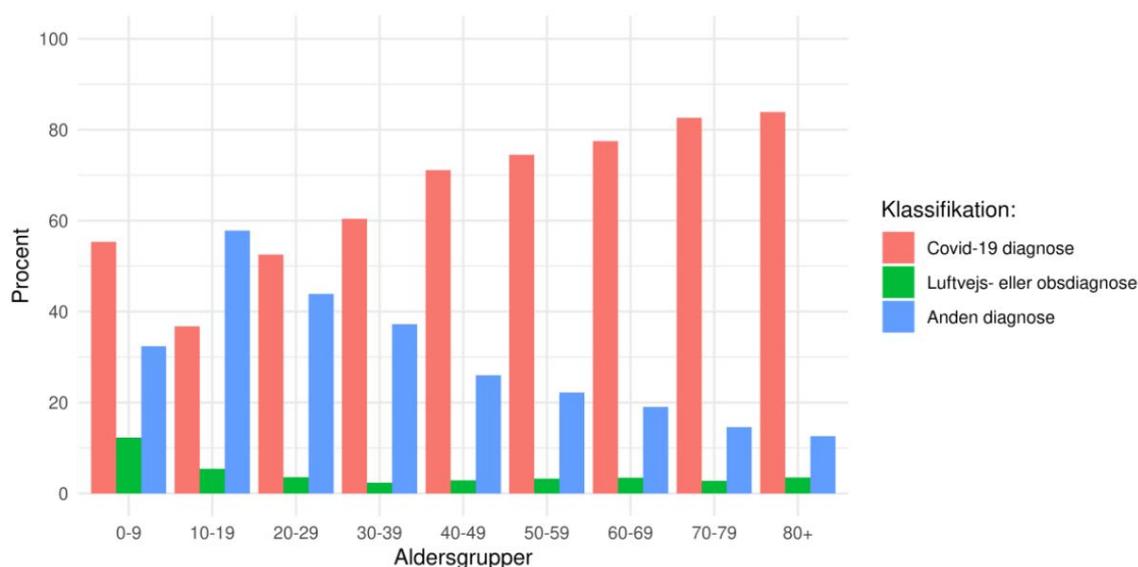
**Table 6. Covid-19: Proportion of new admissions with positive SARS-CoV-2 sample admitted due to covid-19 diagnosis, due to respiratory or obs covid-19 diagnosis, or due to other diagnosis, 1 June 2020 to February 13, 2022**

Diagnosis	2022 week						Trend
	1	2	3	4	5	6	
Covid-19 diagnosis	60%	60%	55%	52%	50%	50%	
Respiratory or observational diagnosis	4%	4%	4%	5%	6%	5%	
Second diagnosis	36%	36%	40%	43%	45%	45%	



**Figure 8. 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 13th 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 divided by age groups, 1 June 2020 to 13 February 2022**



**Table 7. COVID-19: Proportion of PCR-positive people admitted to hospital with a COVID 19 diagnosis, a respiratory or tentative COVID-19 diagnosis, or another diagnosis, who had a psychiatric admission during their hospitalization**

**Table 7. Covid-19: Proportion with positive SARS-CoV-2 sample admitted due to covid-19 diagnosis, respiratory or due to obs covid-19 diagnosis or other diagnosis that has been admitted to psychiatry during hospitalization**

Diagnosis	Covid-19-related admissions to psychiatric wards						Trend
	2022 week						
	1	2	3	4	5	6	
Covid-19 diagnosis	1.7%	2.5%	2.5%	0.9%	1.2%	0.7%	
Respiratory or observational diagnosis	2.2%	5.5%	0.0%	1.1%	0.0%	0.0%	
Second diagnosis	12.9%	12.2%	10.1%	9.2%	9.6%	7.4%	



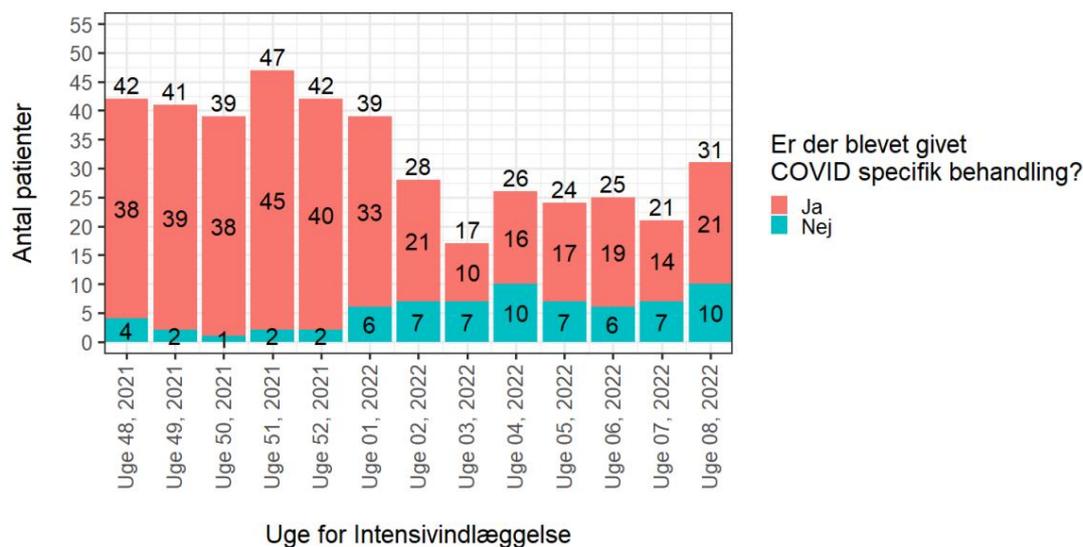
**Table 8. COVID-19: Proportion of PCR-positive hospital admissions with a COVID-19 diagnosis (red), with a respiratory or tentative Covid-19 diagnosis (green), or with other diagnosis (blue), by age groups 0-59 and 60+ years old**

**Table 8. 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
	1	2	3	4	5	6	
<b>0-59-year-olds</b>							
Covid-19 diagnosis	52.1%	54.3%	49.3%	44.3%	39.9%	40.6%	
Respiratory or observational diagnosis	3.7%	4.0%	5.7%	5.0%	5.4%	4.7%	
Second diagnosis	44.1%	41.7%	45.0%	50.7%	54.7%	54.7%	
<b>60+ year olds</b>							
Covid-19 diagnosis	72.0%	71.3%	68.7%	67.8%	65.9%	64.9%	
Respiratory or observational diagnosis	3.8%	4.0%	2.7%	4.0%	6.5%	4.4%	
Second diagnosis	24.1%	24.7%	28.6%	28.3%	27.6%	30.7%	

**Figure 9. 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 9. Covid-19: Number of new admissions on intensive care with SARS-CoV-2 positive sample receiving covid-19 specific treatment, 2021-2022**





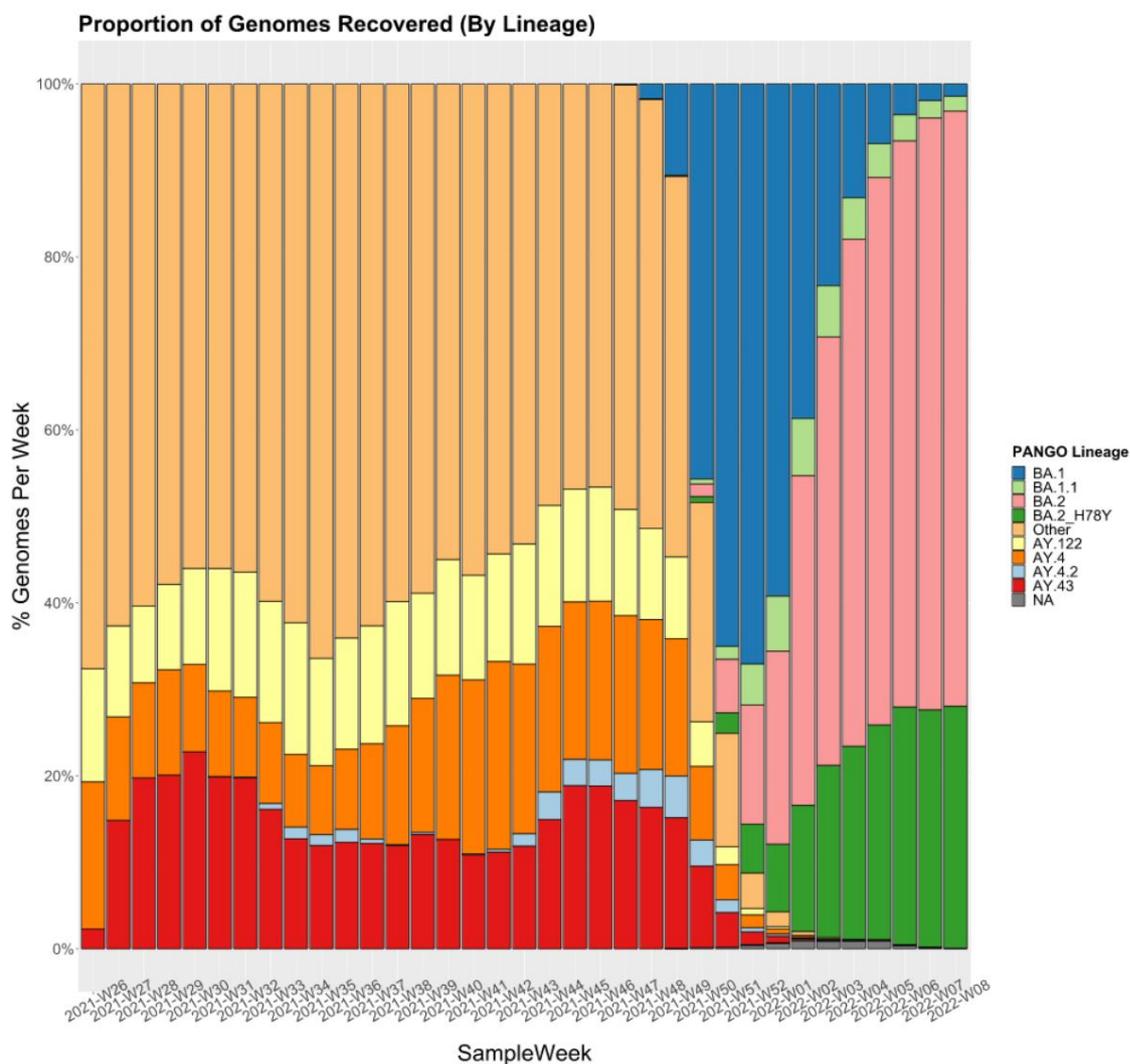
## SARS-CoV-2 variants

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

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

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

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





**Table 9. COVID-19: The 20 most frequently observed sub (variants) based on whole-genome sequencing data for the last four weeks, 2022**

**Table 9. 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	5	6	7	8	
BA.2	Omicron	7215 (63.30%)	8603 (65.45%)	9402 (68.43%)	1480 (68.81%)	2830 (24.83%)
BA.2_H78Y	Omicron	447 (3.92%)	788 (6.00%)	1217 (8.96%)	2 (0.02%)	27 (0.23%)
BA.1.1	Omicron	(0.01%)	1 (0.01%)	0 (0.00%)	1 (0.02%)	266 (1.94%)
BA.1	Omicron		470 (3.58%)	4 (0.03%)	2 (0.01%)	31 (0.27%)
None			54 (0.41%)	2 (0.00%)	0 (0.00%)	0 (0.00%)
BA.3	Omicron		(0.02%)	2 (0.00%)	0 (0.00%)	0 (0.00%)
AY.4	Delta		(0.02%)	0 (0.00%)		0 (0.00%)
AY.121	Delta		(0.00%)	0 (0.00%)		0 (0.00%)
AY.126	Delta		(0.00%)	0 (0.00%)		0 (0.00%)
AY.4.5	Delta		(0.00%)	1 (0.00%)		0 (0.00%)
AY.4.6	Delta		(0.01%)	2 (0.00%)		0 (0.00%)
B			(0.02%)	0 (0.00%)		0 (0.00%)
B.1.617.2	Delta		(0.00%)			0 (0.00%)
Total		11399	13144	13740		2151

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.

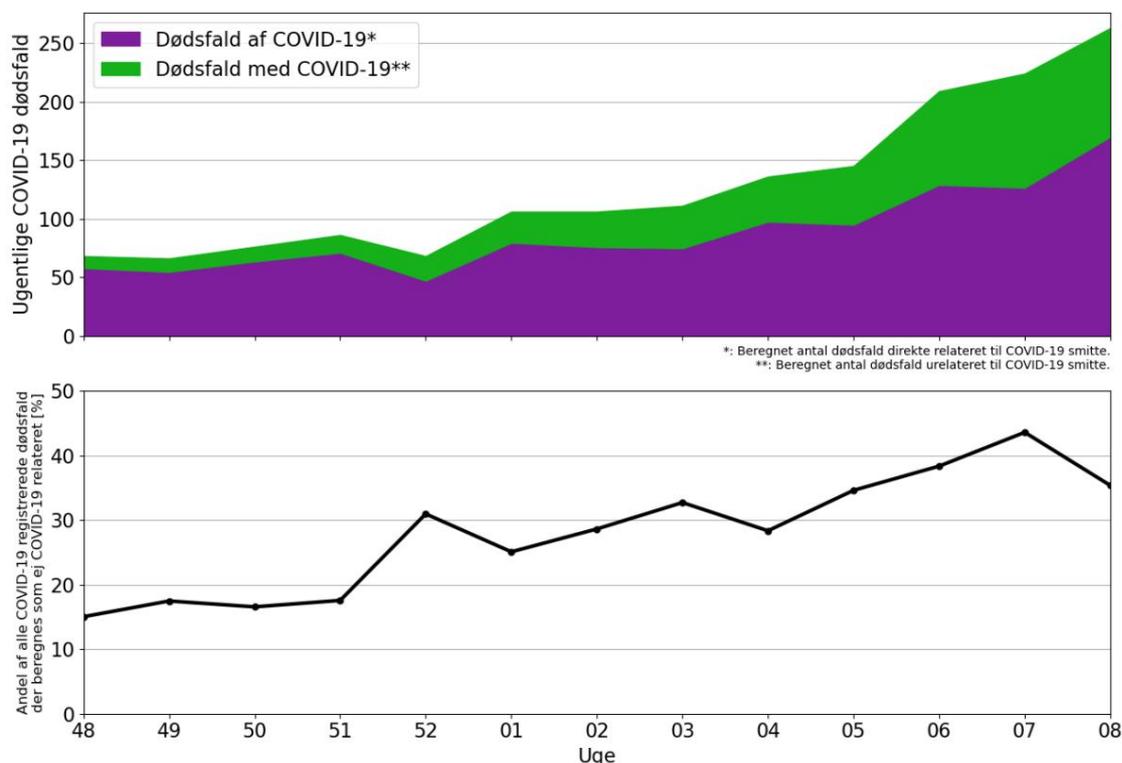


## Mortality

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](http://www.euromomo.eu)).

**Figure 11. 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 11. 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 10. 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 10. 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**

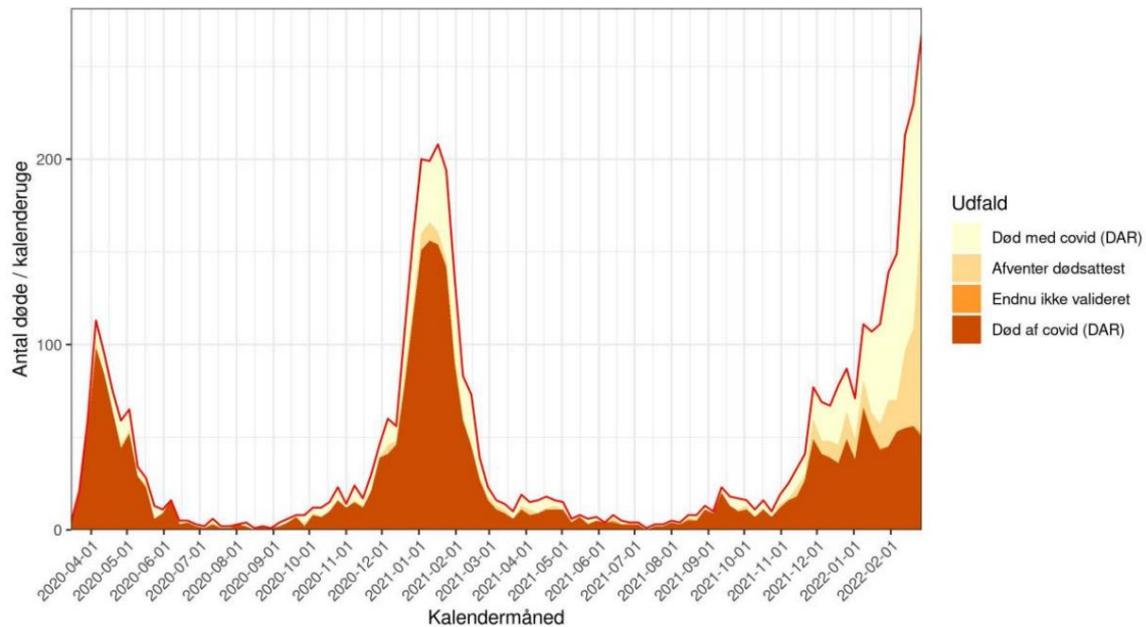
2021/2022, week	Deaths with positive covid-19 PCR test within 30 days, total	Deaths "of" covid-19	Deaths "with" covid-19	Percentage (%) of deaths "with" covid-19
48	68	58	10	15.0
49	66	54	12	17.5
50	76	63	13	16.6
51	86	71	15	17.6
52	68	47	21	30.9
1	106	79	27	25.1
2	106	76	30	28.6
3	111	75	36	32.7
4	136	97	39	28.3
5	145	95	50	34.6
6	209	129	80	38.3
7	224	126	98	43.6
8	263	170	93	35.4

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



**Figure 12. 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 12. Covid-19: Deaths by and including covid-19 based on death certificates, 2020-2022**

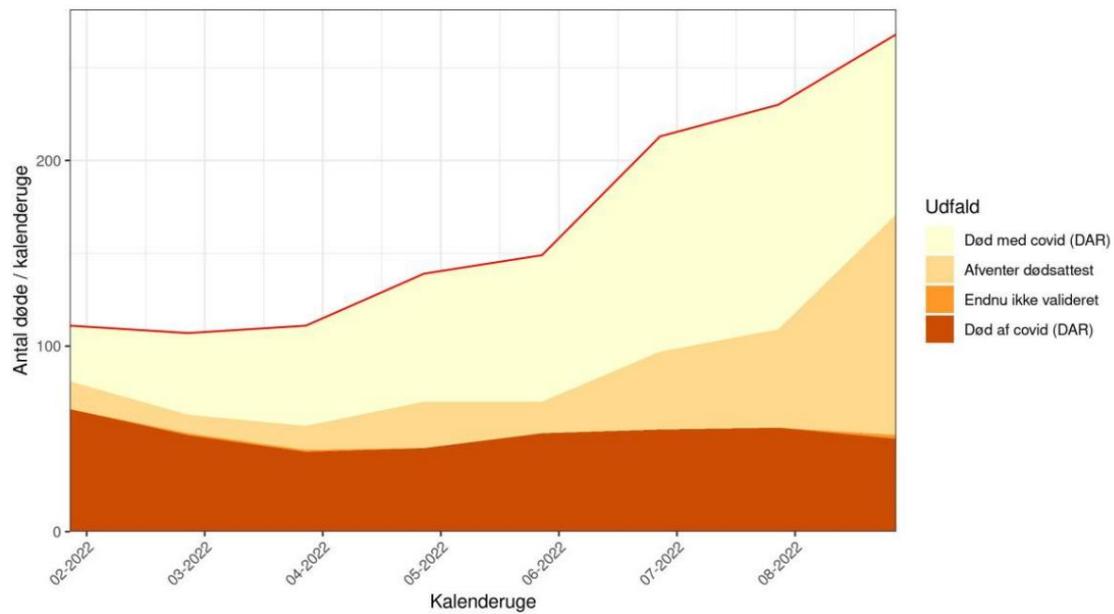


Note: Prepared on the basis of data from the Cause of Death Register (DAR) via the Danish Health and Medicines Authority



**Figure 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), 2021/2022**

**Figure 13. 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

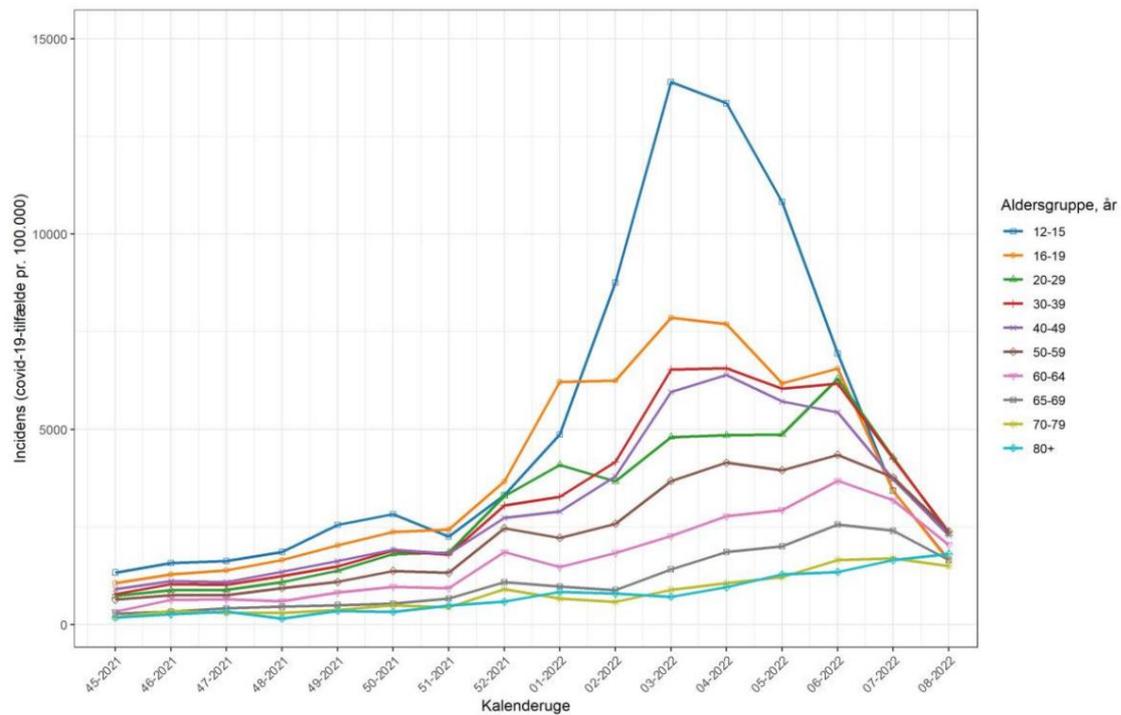


## Breakthrough infections

Data are not updated retrospectively for Figures 14 and 15. SSI's dashboard for covid-19 breakthrough infections is updated daily, and a breakthrough infection report is published monthly on SSI's website.

**Figure 14. COVID-19: Incidence per 100,000 unvaccinated people (12+ years old)**

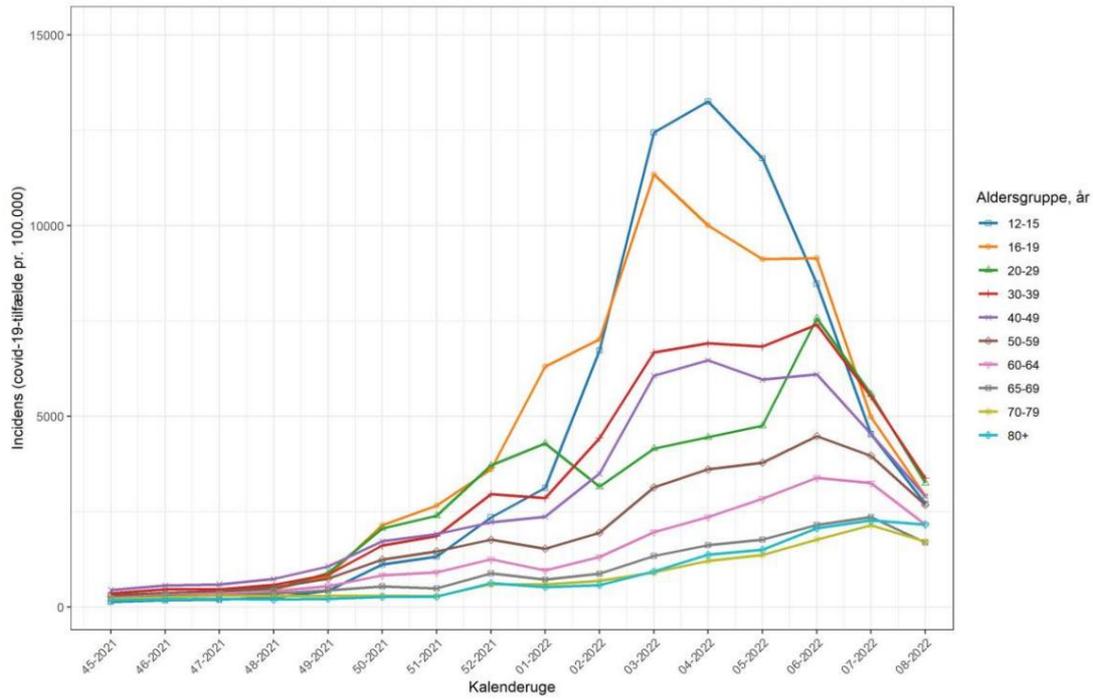
**Figure 14. Covid-19: Incidence per 100,000 unvaccinated (+ 12-year-olds)**





**Figure 15. COVID-19: Incidence per 100,000 people with expected full effect of primary vaccination (12+ years old)**

**Figure 15. Covid-19: Incidence per 100,000 with expected full effect after primary vaccination (+ 12-year-olds)**





## Hospital outbreaks

**Table 11. COVID-19: Outbreaks at hospitals**

**Table 11. Covid-19: hospital outbreaks**

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

## Nursing home

**Table 12. COVID-19 at nursing homes**

**Table 12. Covid-19 in nursing homes**

Covid-19, nursing home	2022 week				
	4	5	6	7	8
Confirmed cases among residents	1,205	1,647 in most common	2,055	2,302	2,002
Deaths among confirmed cases	48	61	88	99	134
Confirmed cases among residents with expected full effect after primary vaccination course	65	76	100	90	75
Confirmed cases among residents with expected full effect after revaccination	1,099	1,504	1,880 in most common	2,141	1,872 in most common
Nursing homes with confirmed cases	339	433	518	548	524



## Special staff groups

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

**Table 13. COVID-19: Confirmed cases among employees in the social sector**

**Table 13. Covid-19: confirmed cases among employees in the social sector**

Business	Covid-19, 2022								
	Week 6			Week 7			Week 8		
	Number of confirmed cases	Incidence per 100,000 in the group	Number (proportion, %) of confirmed cases with expected full effect after revaccination	Number of confirmed cases	Incidence per 100,000 in the group	Percentage (%) of confirmed cases with expected full effect after revaccination	Number of confirmed cases	Incidence per 100,000 in the group	Percentage (%) of confirmed cases with expected full effect after revaccination
Day care, day centers, home help mv.	3,821	7,405	2,934 (76.8)	3,208	6,217	2,627 (81.9)	2,210	4,283	1,832 (82.9)
Nursing homes, etc.	10,248	8,302	8,156 (79.6)	8,495	6,882	7,043 (82.9)	5,808	4,705	4,975 (85.7)
Social in total	14,069	8,037	11,090 (78.8)	11,703	6,686	9,670 (82.6)	8,018	4,988	6,807 (84.9)

**Table 14. COVID-19: Confirmed cases among employees in the health care sector**

**Table 14. Covid-19: confirmed cases among healthcare workers**

Business	Covid-19, 2022								
	Week 6			Week 7			Week 8		
	Number confirmed per 100,000 cases in the group	Incidence per 100,000 in the group	Number (proportion, %) of confirmed cases with expected full effect after revaccination	Number of confirmed cases	Incidence per 100,000 in the group	Percentage (%) of confirmed cases with expected full effect after revaccination	Number of confirmed cases	Incidence per 100,000 in the group	Percentage (%) of confirmed cases with expected full effect after revaccination
Health care and others	3,962	7,341	3,311 (83.6)	3,234	5,992	2,757 (85.3)	2,063	3,962	1,788 (86.7)
Hospitals	9,078	7,310	7,899 (87.0)	7,387	5,948	6,593 (89.3)	4,995	4,022	4,463 (89.3)
Total health	13,040	7,319	11,210 (86.0)	10,621	5,961	9,350 (88.0)	7,058	3,962	6,251 (88.6)

**Table 15. COVID-19: Confirmed cases among employees in day care institutions**

**Table 15. Covid-19: confirmed cases among employees of institutions**

Business	Covid-19, 2022								
	Week 6			Week 7			Week 8		
	Number of confirmed cases	Incidence per 100,000 in the group	Number (proportion, %) of confirmed cases with expected full effect after revaccination	Number of confirmed cases	Incidence per 100,000 in the group	Percentage (%) of confirmed cases with expected full effect after revaccination	Number of confirmed cases	Incidence per 100,000 in the group	Percentage (%) of confirmed cases with expected full effect after revaccination
Institutions *	7,419	8,963	6,098 (82.2)	4,409	5,327	3,717 (84.3)	3,065	3,065	2,154 (84.9)

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

**Table 16. COVID-19: Confirmed cases among employees in the education sector**

**Table 16. Covid-19: confirmed cases among employees in the education sector**

Business	Covid-19, 2022								
	Week 6			Week 7			Week 8		
	Number of confirmed cases	Incidence per 100,000 in the group	Number (proportion, %) of confirmed cases with expected full effect after revaccination	Number of confirmed cases	Incidence per 100,000 in the group	Percentage (%) of confirmed cases with expected full effect after revaccination	Number of confirmed cases	Incidence per 100,000 in the group	Percentage (%) of confirmed cases with expected full effect after revaccination
Primary school	8,299	7,214	6,925 (83.4)	5,322	4,626	4,555 (85.6)	3,083	2,680	2,707 (87.8)
Colleges and vocational schools	1,770	6,705	2,246 (88.1)	1,950	5,131	1,773 (90.9)	1,194	3,142	1,085 (90.9)



## Confirmed cases among Danish travelers

Data are updated backwards in Table 18.

**Table 17. COVID-19: Confirmed cases among Danish travelers arriving to Denmark**

**Table 17. Covid-19: confirmed cases among Danish travelers**

Covid-19	2022 week					
	3	4	5	6	7	8
Number infected with travel activity	1,688	1,506	836	529	482	168
Proportion of infected with travel activity out of all new cases (%)	0.6	0.5	0.3	0.2	0.2	0.1

Note to table: Data on stays abroad are based on data from interview questions from STPS regarding travel activity within 14 days of positive test.

In week 8, most cases of infection are seen in Danish travelers from Germany (34) and Norway (34).



## Sewage

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

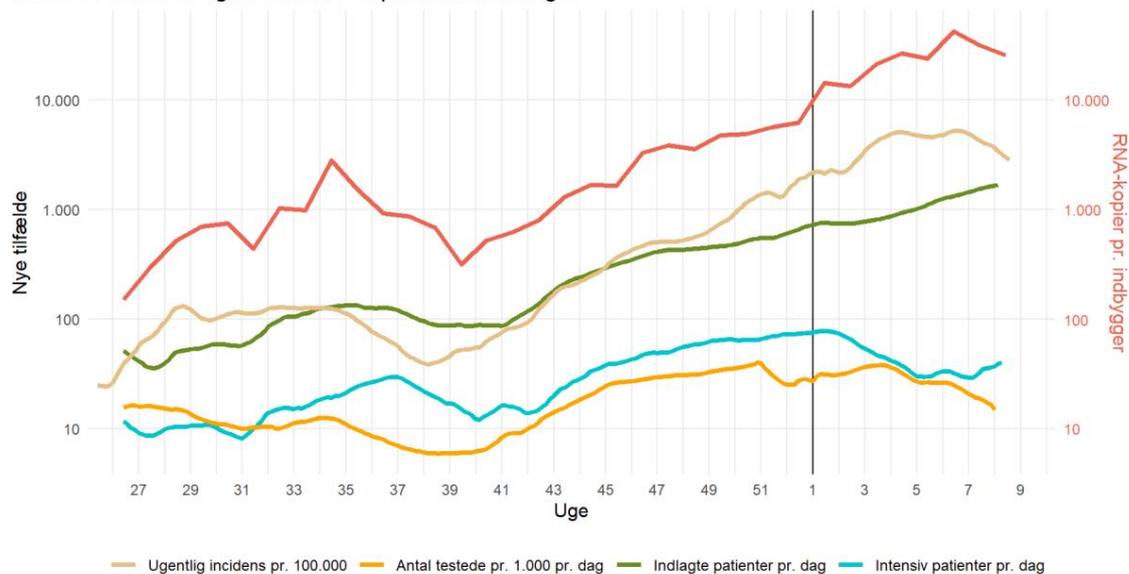
Please note that as of January 3, 2022, a new PCR test has been introduced. Therefore, the results from before and after this date can not be directly compared.

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

**Figure 16. Covid-19: Incidence and results from wastewater measurements, 2021/2022**

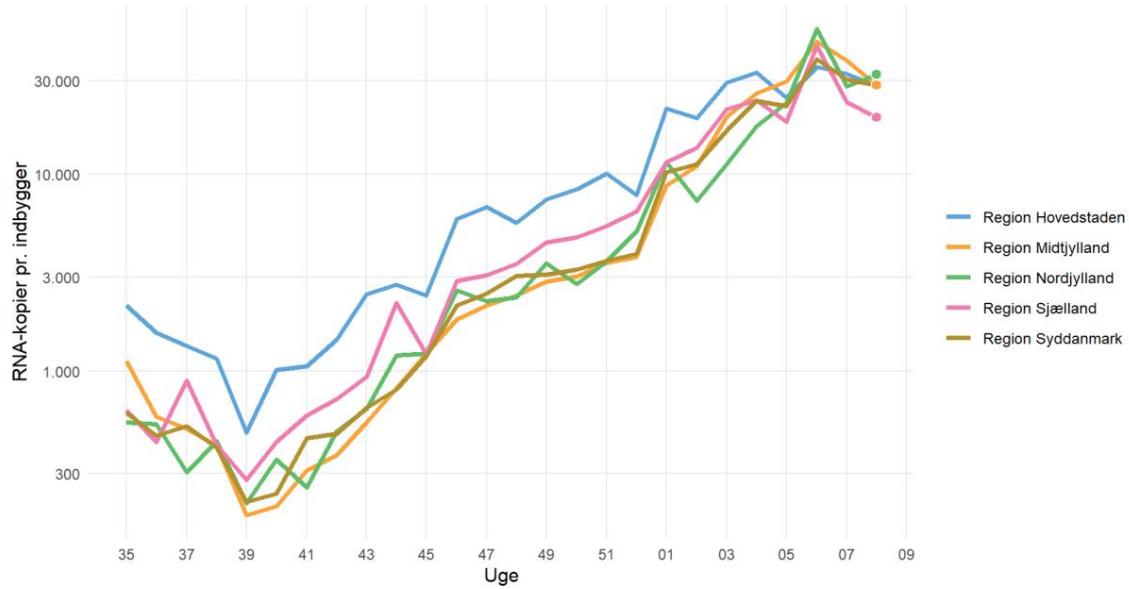
Covid-19 incidens og resultater fra spildevandsmålinger





**Figure 17. COVID-19. Results from waste-water surveillance by region, 2021/2022**  
**Figure 17. Covid-19: Results from wastewater measurements by regions, 2021/2022**

Resultater fra spildevandsmålinger





# 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 data<sup>1</sup>). 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

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<sup>1</sup> <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/>. [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 that are not yet available received response for. 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.



## Covid-19-related admissions to psychiatry

From 11 January 2022 onwards, there will be a separate inventory of covid-related admissions to psychiatry on SSI's dashboard. Data on the dashboard is based on the regions' daily reports of snapshot data up to the day before. SSI continuously prepares a qualification of the covid-related admissions in inpatients with a covid diagnosis, inpatients with a respiratory diagnosis or obs covid diagnosis.

## 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.

## Breakthrough infections

Number of people is the number of people on the first Monday of a given week. A person who changes age group or vaccine status during the week will not appear in more places. A person contributes with risk time as long as the person is alive, resident in Denmark (cpr register) and up to 30 days after the first positive PCR 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 the 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' and the week, because they 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.

## 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](#)

[COVIDmeter](#): Citizens' voluntary reporting of symptoms of covid-19. Updated every Thursday at 2 p.m.