

Denmark: School policies in response to SARS-CoV-2 variant B.1.1.7. A brief update

COVID-19 POLICY SERIES
GLOBAL HEALTH GOVERNANCE PROGRAMME
2nd March 2021



THE UNIVERSITY
of EDINBURGH



GLOBAL HEALTH
GOVERNANCE PROGRAMME

Summary:

- Schools have now been open for the youngest children from pre-school to fourth grade for over three weeks (from 8th Feb).
- In Western and Northern Jutland, graduate students and all adult educational institutions, and all schools on the island of Bornholm, were re-opened on the 28th February.
- Daily COVID-19 cases appear to be decreasing, but the presence of the highly transmissible B.1.17 variant is growing and is now the most dominant strain in Denmark.
- Kolding municipality experienced outbreaks in two schools and eight daycare centers, as well as experiencing a steep increase in cases, catapulting the Covid-19 incidence rate, going from low incidence rate to the highest in the country within a week (12th-19th February). As a result, all schools and daycare centers in Kolding were closed on the 19th February, which was just recently extended to the 7th March.
- On 13th February 2021, schools in Ishøj were asked to physically shut again, only a few days after reopening, because there had been a 67% surge in COVID-19 cases. The closure was recently extended to the 7th March.
- Cases have surged in Aabenraa due to an outbreak in a daycare center. However, these are on the decline.
- There are fears that restarting in-person learning for this set age group is having an impact on community transmission, but there is little evidence to suggest that this is definitely the case so far. However, daycare centers, having been open for months, are seeing an increase in transmission and concern is being raised about whether the most dominant B.1.1.7 variant could be a major culprit and instrumental in increasing transmission among children.

School reopening plan:

- After nearly 9 weeks of physical school closures (except for the children of essential workers), the health minister, Magnus Heunicke confirmed that all children from 0 to 4th grades would be returning to in-person schooling from 8th February 2021ⁱ. This is in response to falling COVID-19 cases across the country, proving that lockdown measures were workingⁱⁱ.
- At that time, there were 450 cases of COVID-19 (77 cases per million people) and a positivity rate of 0.4%ⁱⁱⁱ.
- In Western and Northern Jutland, all ground school students who are graduating this year and all adult educations opened on the 28th February. All teachings will be staggered between 50% in-person teaching, 50% online teaching^{iv}.
- All schools for all students were opened on the island of Bornholm on the 28th February^v.
- COVID-19 transmission permitting, similar relaxations of the restrictions on schools seen in Western and Northern Jutland are set to be introduced in the remaining parts of the country on the 15th March^{vi}.

Surveillance data after three weeks of school's opening:

- Schools have now been open for the youngest children for over three weeks. The latest official count (from Statens Serum Institut) shows that there are 497 cases of COVID-19 cases in the country (per 1st March), with only slight change from 8th February when there were 430 cases^{vii}.
- On 28nd February 2021, the positivity rate (7-day rolling average) was at 0.40%, with no difference from the rate on 8th February 2021 of 0.40^{viii}.
- By the end of the first week of February, the B.1.1.7. variant represented 31% of all positive COVID-19 cases in the country and 45% of cases by 13th February 2021^x. The latest data from 28th February shows that B.1.1.7 represents 65.7% of the sampled cases^{xi}.
- The E484K mutation (a change in the virus' spike protein that may impact vaccines efficacy^{xii} was also monitored. By 12th February 2021 and 16th February, a total of 67 and 93 cases with the E484K mutation were detected in the country, respectively. By 28th February, this number had increased to 143^{xiii}. Moreover, 13 people were infected with the COVID-19 B.1.351 variant. To date, the E484K mutation has not been found among samples with the B.1.1.7 variant.

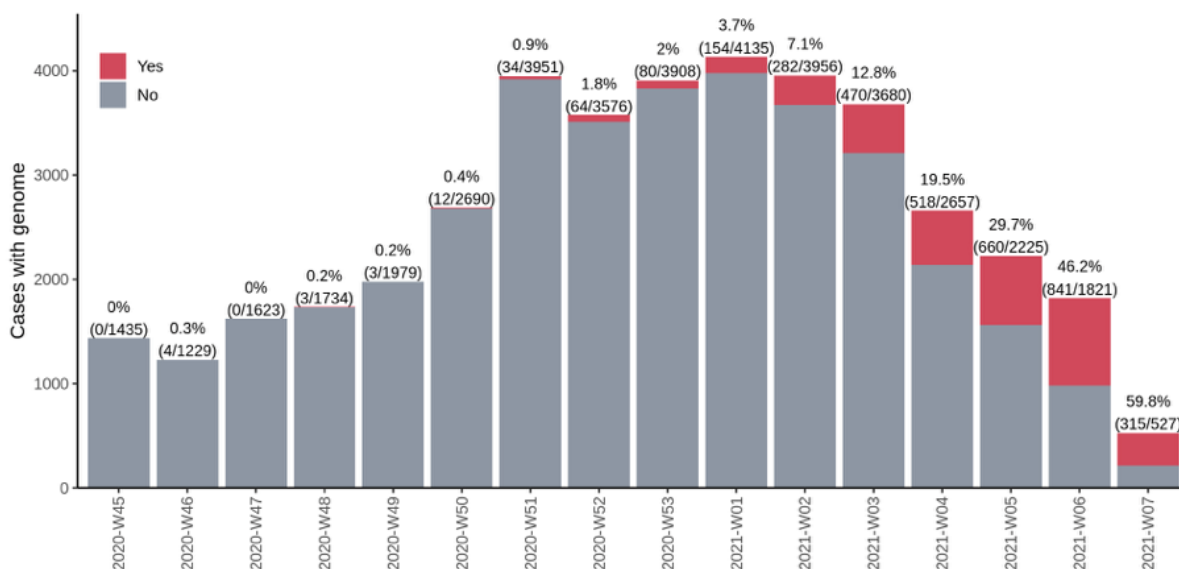


Figure 1. The total weekly number of COVID-19 cases and the proportion in which the B.1.17 variant was detected across Denmark (covid19genomics.dk/statistics) by week 7 2021.

School Closures:

Kolding

- Between 12th-19th February, Kolding municipality went from having one of the lowest Covid-19 incidence rates to the highest in Denmark (299 per 100.000 per 22nd February)^{xiv}. The rate has reduced slightly to 240.9 per 1st March 2021^{xv}.
- Two schools who had newly opened and eight daycare centers, saw considerable outbreaks and were closed^{xvi}
- As a result of the above, the government closed all schools and daycare centers (with postal code 6000 in Kolding) on the 19th February^{xvii}. This includes a total of 15 schools and 28 daycare centers. These restrictions have recently been extended to the

7th March^{xxviii}. All residents above 2 years are urged to get tested, and there has been increased communication urging citizens to follow restrictions^{xxix}

- The testing capacity has been increased to 10.000 tests/day for a municipality with 93.175 inhabitants (2020)^{xx}
- 72 of 234 cases registered in Kolding in week 7 were children between 0-9 years, raising concern that the new variant might change the picture for children, transmission and schooling^{xxi}.

Ishøj

- On 13th February 2021, it was announced that schools were asked to physically shut again in Ishøj municipality, only a few days after reopening, because there had been a 67% surge in COVID-19 cases^{xxii} School closures in Ishøj have recently been extended to 7th March^{xxiii}.
- There is presently no suggestion that this necessarily is a result of schools opening or that there was an outbreak in schools in this area (ibid). Ishøj municipality has had one of the highest incidence rates during the entire COVID-19 period – also while schools were shut. This small town is in close proximity to Copenhagen (22 Km distance).
- At the time, there were 315 cases/100,000 people (total number of cases at 72). On the 22nd February there were 166.2 cases/100,000 people (total no. cases: 38)^{xxiv} However, per 1st March, Ishøj is again the municipality with the highest incidence rate 363.1/100.000^{xxv}.
- Notably, there are a relatively high number of COVID-19 cases in the neighboring regions of Greve and Vallensbaek (a Copenhagen suburb)^{xxvi}. Schools are not closed in these municipalities.

Aabenraa

- Like Kolding, Aabenraa saw a sudden rapid increase in cases during a two week span, going from a steady 17 cases/week to 80/week, resulting in Aabenraa having the third largest incidence rate in Denmark (136.4/100.000 per 22nd February)^{xxvii}. However, the incidence rate has dropped considerably during the last week to 64.8/100.000 (per 1st March)^{xxviii}
- It is believed that an outbreak in a local daycare center triggered the significant increase in transmission, as 16 children, 5 pedagogues and 6 parents were initially infected, while more are believed to be infected^{xxix}
- The daycare center subsequently closed.

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- ⁱ <https://www.thelocal.dk/20210212/denmark-sustains-low-rate-of-covid-19-infections-but-b117-spread-continues>
- ⁱⁱ <https://www.worldometers.info/coronavirus/country/denmark/>
- ⁱⁱⁱ <https://ourworldindata.org/coronavirus/country/denmark>
- ^{iv} https://coronasmitte.dk/Media/E/A/Pjece_gradvis%20genåbning_240221%20NKC.pdf
- ^v https://coronasmitte.dk/Media/E/A/Pjece_gradvis%20genåbning_240221%20NKC.pdf
- ^{vi} https://coronasmitte.dk/Media/E/A/Pjece_gradvis%20genåbning_240221%20NKC.pdf
- ^{vii} <https://www.sst.dk/en/english/corona-eng/status-of-the-epidemic/covid-19-updates-statistics-and-charts>
- ^{viii} https://experience.arcgis.com/experience/aa41b29149f24e20a4007a0c4e13db1d/page/page_1/
- ^{ix} <https://ourworldindata.org/coronavirus/country/denmark>
- ^x <https://covid19genomics.dk/statistics>
- ^{xi} <https://files.ssi.dk/covid19/virusvarianter/status/status-virusvarianter-28022021-s1p0>
- ^{xii} <https://www.ssi.dk/aktuelt/nyheder/2021/status-for-covid-19-virusmutationen-e484k>
- ^{xiii} <https://files.ssi.dk/covid19/virusvarianter/status/status-virusvarianter-28022021-s1p0>
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- ^{xv} https://experience.arcgis.com/experience/aa41b29149f24e20a4007a0c4e13db1d/page/page_0/
- ^{xvi} <https://www.dr.dk/nyheder/regionale/trekanten/smitte-stiger-i-kolding-corona-lukker-skoler-og-otte-daginstitutioner>
- ^{xvii} <https://sum.dk/nyheder/2021/februar/skaerpede-tiltag-i-kolding-kommune>
- ^{xviii} <https://www.lokalavisen.dk/nyheder/2021-02-27/Smitteboom-Her-skal-skoler-fortsat-holde-helt-lukket-7623671.html>
- ^{xix} <https://sum.dk/nyheder/2021/februar/skaerpede-tiltag-i-kolding-kommune>
- ^{xx} <https://www.aeldresagen.dk/lokalafdelinger/kolding/aktuelt/anbefaler-test-af-60000-koldingensere>
- ^{xxi} <https://www.dr.dk/nyheder/indland/ekspert-efter-smitteudbrud-blandt-boern-i-kolding-skoleaabning-har-nok-vaeret>
- ^{xxii} <https://www.thelocal.dk/20210213/denmark-closes-schools-in-copenhagen-suburb-after-infection-surge>
- ^{xxiii} <https://www.lokalavisen.dk/nyheder/2021-02-27/Smitteboom-Her-skal-skoler-fortsat-holde-helt-lukket-7623671.html>
- ^{xxiv} https://experience.arcgis.com/experience/aa41b29149f24e20a4007a0c4e13db1d/page/page_0/
- ^{xxv} https://experience.arcgis.com/experience/aa41b29149f24e20a4007a0c4e13db1d/page/page_0/
- ^{xxvi} <https://www.thelocal.dk/20210213/denmark-closes-schools-in-copenhagen-suburb-after-infection-surge>
- ^{xxvii} https://experience.arcgis.com/experience/aa41b29149f24e20a4007a0c4e13db1d/page/page_0/
- ^{xxviii} https://experience.arcgis.com/experience/aa41b29149f24e20a4007a0c4e13db1d/page/page_0/
- ^{xxix} <https://jv.dk/artikel/smittetal-fordoblet-pa-et-dogn-udbrud-i-børnehaver-er-forklaringen>