2020-05-05

Novus Coronastatus 0505:
Suspected infected in Sweden, regions and compared to found infected

This is an English translation the Swedish report can be downloaded here:
https://novus.se/coronastatus-0505/

Summary

If we compare Novus' study with the proportion who think they have been infected by Corona in Stockholm with KTH's clinical tests, we can conclude that the results are the same at the same time. Because of that it makes sense to conclude that self-estimation is quite accurate.

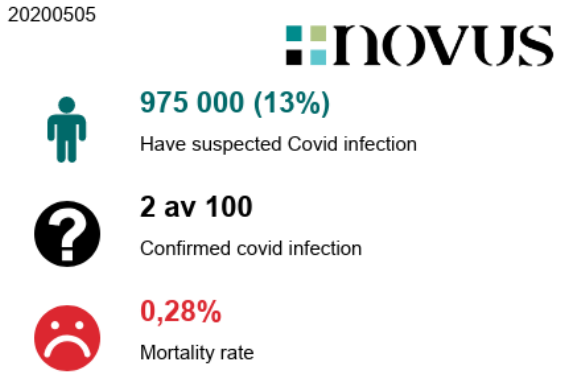
This would mean that 13% of all adult Swedes today are infected with the Corona virus. At the end of March/April, 7% were infected. Almost doubling, then, since then. But the development looks linear that is slowing down not exponential. This again confirms that the curve has been leveled during this period. But also shows that when the Public Health Agency went off the alarm about the general spread of infection, 7% of Stockholmers and 4% of Swedes were already infected. The exponential development probably occurred before it was discovered? Will more signs of the infection exist in Europe far earlier than known. Something Novus reported on earlier. About 50,000 Swedes report that they were infected in December and January.

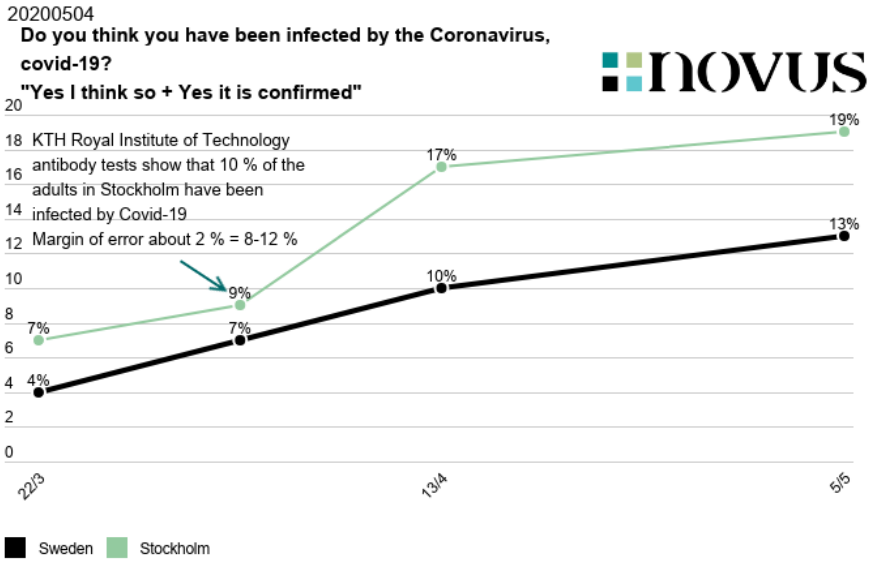
It differs between regions, the most infections are in Stockholm, where now 320,000 adults report being infected, then Western Sweden with 220,000 and Central Sweden with 190,000.

The mortality rate of Covid-19 would based on our surveys be 0.28%. 2.3% of all infected people would be confirmed cases in May, and 98 % of all infected by Coronavirus in Sweden is untested. But the more you test, the less the unknown would become and the difference between confirmed and unknown cases shrinks. The number of people found infected grows the more one tests.

But the better one can describe the symptoms and course of the disease the better Novus research would also be around the number of unknown infections. But clinical test that reported yesterday shows that it is quite likely that Novus research is quite reliable. Now the focus is on the serious and the acutely ill and their symptoms. This is ill-match with the image of the corona virus and its spread in Sweden.

Read more on the following pages.

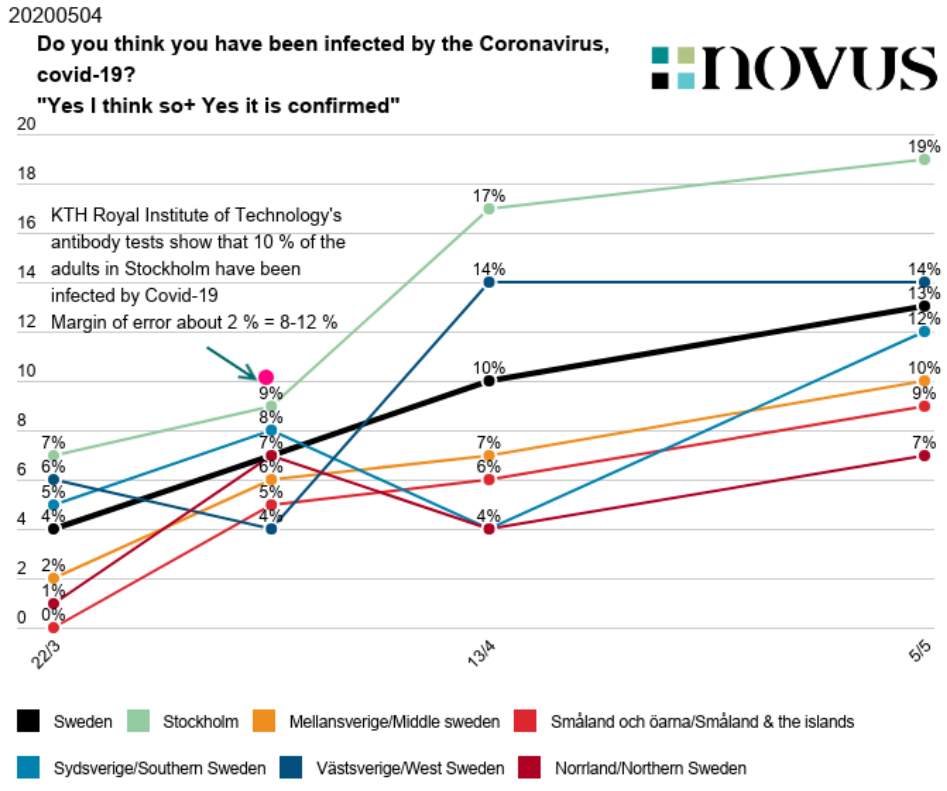




Distribution by regions and development over time

Based on the fact that Novus' study gave similar results as KTH's clinical tests, I dare to look at the whole of Sweden and assume that self-assessment is quite accurate in other regions and also is that looking at different dataset over time. Not just the data point KTH gave us. This is not a forecast but based on actual survey data over these times. Since it is self-assessment the number of infected can go down in the chart. That is of course not the case, only a reminder that self-assessment adds another level of uncertainty. But this still gives the best picture of the Coronavirus spread in Sweden. We know that most people do not seek medical attention.

About 975,000 adult Swedes today report that they believe they have been infected by Corona in Sweden, that is 13 % of all Swedish adults.



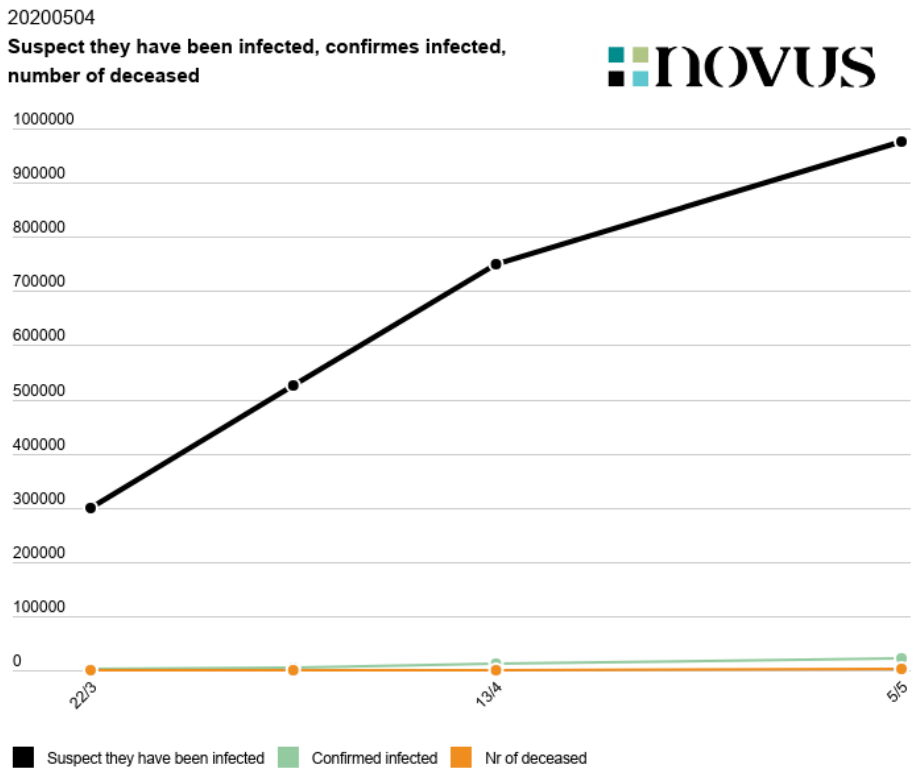
And they are spread all over Sweden, not just the capitol Stockholm.

	Total	Stockholm	Central Sweden	Småland and the islands	Southern Sweden	West Sweden	Norrland
0322	300 000	120 000	40 000	0	60 000	90 000	10 000
0402	525 000	150 000	110 000	30 000	90 000	60 000	50 000
0413	750 000	290 000	130 000	40 000	40 000	210 000	30 000
0503	975,000	320 000	190 000	60 000	130 000	220 000	50 000

Number of infected compared to cases and deaths

There are of course several assumptions in this, but since we could see how well the self-assessment residents in Stockholm compared to the clinical tests from KTH, we can count further from our data. Of course, it's hard to say definitively whether you've been infected with the Corona virus. At the same time, society and Swedish strategy is built on self-assessment. If you are sick, you should stay at home, keep your social distancing, and help to flatten the curve. The symptoms that the Corona virus also exhibits seem to behave in a completely different way than seasonal flu, one is sick longer. Many people have lighter symptoms, but it doesn't pass. The symptoms change over time, etc. So that as an individual you can quite well determine whether it is a common cold, flu, or the Coronavirus. This is not just since we see that we get the same level in Stockholm at the same time it is also confirmed in the other questions we see in our research that respondents in general seem very familiar with the symptoms and stating that this is not a regular flu.

If we then look at the spread of the disease in Sweden based on Novus' examination and add confirmed clinical cases and deaths in the same graph:



It is difficult to see the number of people found infected and deceased in the chart for the proportion of suspected infected people increasing so rapidly in Sweden. The curve of the number of suspected infected pulls away in a completely different way than the proportion of cases found and the number of deaths. But still is not an exponential development but rather a linear curve that slows down at the end.

Here is a table instead for easier overview:

	Think they infected Sweden	Cases found	Relationship infected/detected cases	Number of deaths	Mortality
0322	300 000	1 984	0,7%	23	0,008%
0402	525 000	5 874	1,1%	307	0,058%
0413	750 000	11 351	1,5%	953	0,127%
0503	975 000	22 416	2,3%	2 698	0,277%

Here I have added what mortality rate it would result in. As you can see, the mortality rate goes up from 0.08 per mille to 2.7 per mille over time. However, if you also look at the National Board of Health and Welfare's statistics on deaths, those who die mainly consist of "older elderly people" as the Public Health Agency calls them. They have in common not only high age, but also high blood pressure and an infection of the Corona virus. They also almost all also have at least one additional underlying disease such as cardiovascular disease, lung disease or diabetes. The big problem in Sweden is the fact that Corona virus has entered the health care of the elderly. That significantly affects the increased number of deaths in Sweden. It does not depend on how many people are infected as much as who is infected. Protecting our elderly is absolutely crucial in how much mortality the Corona virus has in Sweden. It is nothing new but worth pointing out here too. The more "older elderly people" who are infected, the higher the mortality rate. The more people you test, the greater the proportion of cases found compared to how many people think they are infected.

Grasping the unknown, the asymptomatic?

Thinking about what is meant by symptom-free or asymptomatic. The story is that most people don't get any symptoms. That is not looking very likely looking at Novus' study. Because if that was the case Novus research should show far fewer infected than KTH's tests. It probably more depends on is meant by symptom-free. There have been various definitions on this when I read about the reporting about it. Coronavirus is a very "strange" cold. Most people will probably identify it as something other than a common cold and realize that they are probably the Corona virus and therefore state in the study that one has been infected.

Of course, this should be taken with a grain of salt. But this should give a pretty good rough picture of how the spread of infection occurs over time and in regions where Sweden lack large scale clinical testing. I have been waiting to compare our data with clinical tests for almost two months. The first tests in Stockholm that only took active cases and arrived at 2.5% we could not use in a good way. For those tests showed only actively infected with an initial five-day window. To compare with our data in Stockholm would be too uncertain, then we could only look at the group that said that they were infected recently and at the same time understood that what they received is Corona. It would introduce even more sources of error in interpreting both our data, but also the self-assessment. It is less probable that you realize in the first few days that it is the Corona virus. With KTH's data on antibodies, we have better data to compare against, and more confidently can say that self-assessment says a lot.

For more information about the survey please contact

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Background

Novus always presents the latest report or survey on Corona here: https://novus.se/novus-coronastatus/

Novus has since 19 March regularly upp to daily investigated swedes' views of the Corona virus, their health status, symptoms, when one became, how long one has been sick and thoughts about the disease and authorities.

On May 4, KTH released clinical tests on antibodies, and finally we got a data point to go on that allows us to look a little closer at how well self-rated disease matches clinical tests.

KTH's studies show that 10% of Stockholmers contracted the coronavirus at the end of March. If we assume that the loss was random and that the accuracy of the tests is good in their studies, it would mean a margin of error of just under 2 %, there are several assumptions here, but it gives us a starting point that is a different test and something we can compare with Novus studies.

Around the end of March, 9% of Stockholmers in novus survey said they believe they were infected with Corona or have found that they have Corona. The margin of error in Novus' surveys is also a couple of percent. But this provides a level that is very consistent with the clinical tests. When the results are so close together, one can conclude that the Swedes' self-assessment of whether one is infected fits quite well with clinical tests. The difference was within the margin of error, we can look at developments over time but also developments throughout Sweden.

I will start from Novus data in this, we have not recalculated anything based on KTH's clinical tests, but the results are so close to each other that it would not give anything.

Novus has during the period 19 March to 5 May conducted over 20,000 interviews in Novus Sverigepanel, with at least two surveys a week, but for long periods also daily conducted surveys. Novus Sverigepanel is a probability based panel of Swedish adults age from 18 and up, majority of the studies included here is in the age span of 18-79 although a couple of research is made up to 89 years. The surveys give a good picture of the Swedish people's view of what the Swedish people think during the period under investigation. Participation rates have averaged 70% per day. Record results, which strengthens the reliability of the survey.