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Abstract

Our report analyses the structure of COVID-19-related mortality and morbidity in Sweden during the period March 2020-February 2021. The analyses are carried out through Cox regressions and based on individual-level data from Swedish registers on causes of death, PCR tests, admissions to hospitals, and a wide range of socio-demographic and health-related background factors for the entire population of Sweden. Sweden had significantly elevated levels of mortality and morbidity during March-June 2020 and November 2020-January 2021. Excess mortality was highest among the oldest members of the population and among persons born abroad. COVID-19 mortality risks for people in many different population categories had much the same pattern as those for other mortality risks, but they deviated in pattern for the foreign-born and were remarkably high for older people in special housing. Excess mortality among the foreign-born was reduced in the second half of the pandemic year, while the risk of death for elderly people in care homes remained high in the second and third waves of the pandemic. The excess mortality and high risks of COVID-19-related morbidity among the foreign-born cannot be explained by socio-economic or structural conditions, by differences in underlying health, or by a clearly less favorable progression through the various stages of the health-care system.

Keywords: COVID-19, mortality, morbidity, Sweden

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About the report

This report is a translation into English of a report in Swedish language which was produced as one of many inputs to the work in 2021 of the Swedish Corona Commission. It is based on data organized within the *Research Programme on COVID-19 in Sweden: Transmission, Control and Impact on Individuals and Society*, based at Stockholm University. The program is based on a comprehensive data set consisting mainly of register data on individuals in Sweden from data providers such as Statistics Sweden, the National Board of Health and Welfare, the Public Health Agency, the National Insurance Agency, the Swedish Tax Agency, and the Inera/1177 system of self-ordered PCR testing. The program has received ethical approval from the Ethical Review Authority (Dnr 2020-06492 and Dnr 2021-01115) for data handling and analyses of a number of specific issues. The relationship between the SU program and the Commission is specified in the ethics approval.

Introduction

Like other countries, Sweden was affected by various consequences of the international COVID-19 pandemic, originating in Wuhan, China, and with its first documented case in Europe occurring in northern Italy in early 2020. In our report, we present data on, and analyses of, the patterns of mortality and morbidity during the 12 months when Sweden was most affected by the pandemic and for which we have data on mortality and hospitalizations that can be related to COVID-19.

Public statistics for 2020-2021 show that the number of deaths was significantly higher than normal in the period from March 2020 to February 2021 (www.statistikdatabasen.scb.se). During the 12-month period in question, 99,824 people died, which was 12.4% or 11,036 persons more than in the corresponding 12-month period immediately before the pandemic. During the period, death rates were noticeably higher in March, April, May and June 2020, and in November-December 2020 and January 2021, corresponding to a first and a second+third wave of the pandemic. Death rates were highest in April and December 2020. In the months immediately preceding the first wave, as well as between waves one and two, and after wave three, the number of deaths did not deviate from what might have been expected.

Since the patterns of mortality and morbidity may have shifted as the spread of infection took new paths during the year that Sweden was affected by the pandemic, we indicate, where appropriate, whether separate analyses of the patterns of mortality and morbidity need to be made for the period March-August 2020 and September 2020-February 2021. For most of the outcomes we study, this turns out not to be the case. However, we know that the patterns of morbidity and mortality differ substantially for different age groups and therefore present separate analyses for the patterns of morbidity and mortality for the age categories 21-69 years and 70 years and older for all the outcomes we study.

In our report, we present analyses of the following outcomes and processes:

- Excess mortality in the calendar year 2020, compared to the expected mortality based on data for an appropriate reference period.
- Mortality and risks of death for different population categories in the period March 2020-February 2021.
- The structure of testing behavior, based on self-ordered PCR tests from the 1177 system during the same period.
- The structure of positive tests, i.e. the incidence of being infected in COVID-19, based on data from the Public Health Agency's SmiNet database.
- The structure of hospital admissions with COVID-19 as the main diagnosis during the same period.
- The structure of ICU admissions with a COVID-19 diagnosis.

In the table below, we report the number of people in our study with analyzable data who ordered a test through the 1177 system during the 12-month period we study, who were registered with a positive test result in the Public Health Agency’s database, who were admitted to hospital with a COVID-19 diagnosis, who were admitted for an intensive care episode, and who died with COVID-19 as a contributing cause of death. All of these events are included in our analyses of the structure of the various factors that may have contributed to increased risks of mortality and morbidity during the pandemic year. We

report below the distribution of the different events among people aged 21-69 years and 70 years and above. The table shows that self-administered tests and positive cases of COVID-19 are heavily concentrated in the younger age range, while deaths are heavily concentrated in the older age range. Hospital admissions with a COVID-19 diagnosis are more evenly distributed between the two age categories, while admissions to intensive care have been more common among the slightly younger age groups. The incidence of morbidity and mortality has been fairly evenly distributed between the first wave of the pandemic (in the spring and summer of 2020) and its second and third waves (in the autumn and winter of 2020-2021). In contrast, our data on testing and positive test results are heavily concentrated in the second half of the 12-month period we are studying. Testing activity in the spring of 2020 was extremely limited in scope.

Table 1: Studied testing, morbidity and mortality in Sweden during March 2020-February 2021

Outcome	Number of persons	Share 21-69 years	Share 70+	Proportion wave 1
1177 testing	1,162,914	96.7%	3.3%	11.7%
Positive case, SmiNet	559,306	89.5%	10.5%	13.8%
Hospitalization	38,949	49.6%	50.4%	42.1%
ICU	4,992	66.3%	33.7%	49.2%
Death	13,844	8.6%	91.4%	46.9%

In most cases, we report the structure of the different outcomes based on multivariate analyses of the risk of experiencing any of the events we study, because many of the variables we consider are correlated with each other and a multivariate analysis provides better insight into the separate effects of the different factors that may have contributed to increased (or decreased) mortality and morbidity in COVID-19. To better inform interpretations of the results from our analyses, we also report univariate correlations, i.e. incidence rates, for the different categories of the different variables in comprehensive tabular appendices in an appendix to our report.

The variables we consider in our analyses correspond to characteristics of different individuals that might be associated with different degrees of increased mortality and morbidity during the pandemic year. The variables are based on indicators that can be derived from data in Sweden's high-quality system of population registers: the data sources are population registers and other registers administered by Statistics Sweden, as well as registers of causes of death and various health variables administered by the National Board of Health and Welfare.

The variables we consider cover information that is necessary to account for in a high-quality study of mortality and morbidity, we have built on definitions that the Corona Commission Office had initiated. To facilitate understanding of the analyses that follow, we first present our variables in the following brief description.

Age and *sex* are two very basic demographic variables that are considered in any mortality study. Age is included as a continuous or grouped variable, but because the structure of mortality and morbidity differs substantially between younger and older population groups, we also report all analyses stratified with separate studies for people aged 21-69 and ages 70+.

Socio-economic status is measured by the *level of education* (primary, upper secondary, post-secondary) and *income level* (divided into four quartiles from lowest to highest) that persons residing in Sweden were registered with in the years immediately preceding the pandemic. Education is based on information for 2019 and income quartiles are based on percentiles within each birth cohort with respect to individual disposable income over the period 2015-2019.

Country of birth is important to consider and here we use a classification that we have found appropriate in our previous studies on differences in mortality (Drefahl et al. 2020; Rostila et al. 2021). We distinguish between persons born in Sweden, persons born in other high-income countries, and persons born in a middle- or low-income country (according to an OECD classification based on the UN Human Development Index for different countries). The latter group is divided into persons born in North Africa and the Middle East (MENA) and other countries.

Marital status is an important health-related factor, and is represented by the categories unmarried, married, divorced, and widowed.

Two additional variables describe the effect of different conditions related to a person's housing situation: *crowded housing* refers to the situation in one's own dwelling and indicates a situation where the living space for residents in multi-person households is less than 20 sqm/person. In contrast, *deprived area* measures the situation in the neighborhood, at the small-area statistics (DeSo) level, and refers to living in an area with a high proportion of people in the lowest income quartile.

For people aged 21-69, we also consider a variable that includes different definitions of a person's occupational and work situation. The variable is based on classifications of different occupations and the occupation a person had according to Swedish register data at the end of 2019, with information on occupations filtered over data on the degree to which they involve a high degree of *personal contact* as well as the possibility of *working at home*. Persons without a registered job form a separate category and those who do not have the possibility of working at home are divided into three categories according to how high a degree of personal contact they can be expected to have in their registered occupation.

Our analyses also take into account the underlying health of individuals as measured by data from the National Board of Health and Welfare's registers. Here, we take into account whether an individual was treated for a *cardiovascular disease*, *cancer*, or a *mental or behavioral disorder* at any time during the period 2015-2019. We have also used a variable created by the National Board of Health and Welfare that indicates whether a person can be considered to belong to a medical *risk group for covid*. Finally, we have a variable indicating whether a person has a *disability* according to the National Board of Health and Welfare, which means that he/she has had personal assistance according to the Act on Support and Services (LSS).

For the very oldest, we explicitly take into account a person's care situation by distinguishing between persons without care services, persons with home care services, and persons receiving care in an institutional setting (special housing, nursing homes).

In our descriptive statistics in our appendix, we also take into account, among other things, the region in Sweden in which a person lived, broken down into Sweden's 24 counties.

Excess mortality in Sweden in 2020

As an introduction to our report, we present an overview with indicators for a few population groups that had a noticeable *excess mortality* in the calendar year 2020 - in terms of a higher number of deaths in that year compared to the expected number of deaths based on statistics from a previous reference period. To facilitate comparisons with similar descriptive statistics from other countries, we base our measures on excess mortality for the full year 2020, as international mortality statistics are often presented for calendar years. In international comparisons, Sweden stands out with significantly higher mortality rates than those in other Nordic countries, but not in comparison with other countries in Europe (Achilleos, Quattrocchi et al. 2021).

In terms of selecting an appropriate reference period to calculate the excess mortality in 2020, 2019 works best as the reference period. Since mortality rates have fallen quite substantially over previous years, a longer period of data leads to a comparison with a period when mortality rates were higher than what would be expected for 2020 (Kolk et al. 2021). Nevertheless, to avoid the effects of random fluctuations in mortality for different subpopulations, it may be useful to build the reference period on a few more years of observations. We therefore present measures of excess mortality for different population groups in 2020 compared to what was observed in terms of the number of deaths in 2019 as well as during an average of the years 2017-2019.

The excess mortality rate in percent provides a summary measure of the overall impact of COVID-19 on mortality during a given period, which may sometimes be preferable in international comparisons of mortality outcomes as some countries do not always have the same quality of data on causes of death as in Sweden. An additional advantage is that such a measure also takes into account various indirect effects of the pandemic that may influence mortality in a positive as well as a negative direction.

The following figures show the excess mortality rates for people in four broad age ranges in combination with the following variables: gender, educational level, and country of birth. Values greater than one in the various charts indicate that a particular population category had an excess mortality in 2020 as compared to 2019 or 2017-2019. It is clear that age is the single most important factor influencing excess mortality - with increasing excess mortality rates with increasing age. In contrast, in the under-50 age group, we note some under-mortality in 2020. Another factor that had a major impact on the degree of excess mortality is country of birth: people born in the Middle East-North Africa in particular had significant excess mortality in all age categories from age 50 and upwards.

These descriptive measures of patterns of excess mortality calls for a more comprehensive approach with more detailed multivariate analyses of the different patterns in mortality during the pandemic. We note that the degree of excess mortality can also be studied with other measures than those based on just the total number of deaths during a given period.

If we also take into account the age structure of mortality risk and focus on measures such as life expectancy and remaining years of life lost, we find that different measures of COVID-19-related excess mortality become much less distinctive than those we show here (Kolk et al. 2021).

In further analyses, we delimit our data to cover the period that was actually most affected by the pandemic, i.e. the 12 months from March 2020 to February 2021.

Figure 1a: Excess mortality for different combinations of age and gender (2020 vs 2017-19)

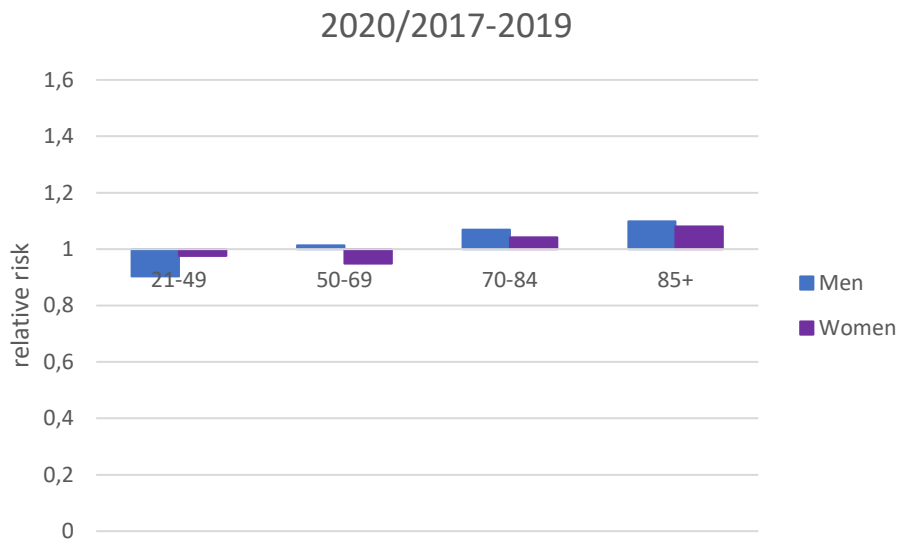
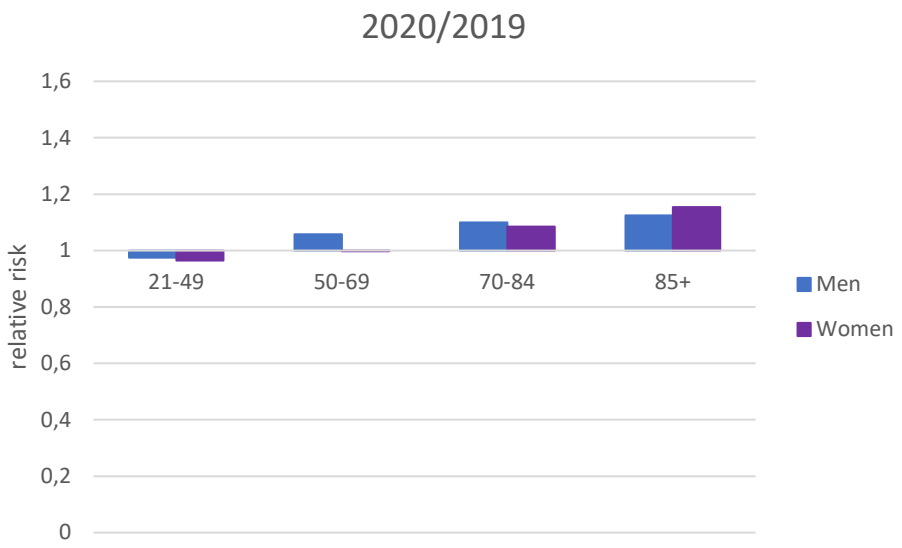


Figure 1b: Excess mortality for different combinations of age and gender (2020 vs 2019)



Calculations within SU's COVID-19 programme, data from Statistics Sweden

Figure 2a: Excess mortality for different combinations of age and education level (2020 vs 2017-2019)

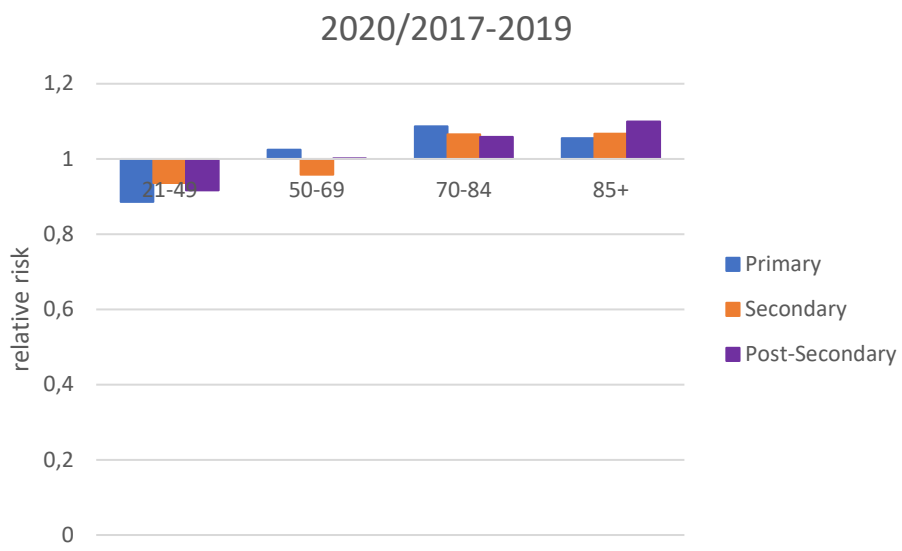
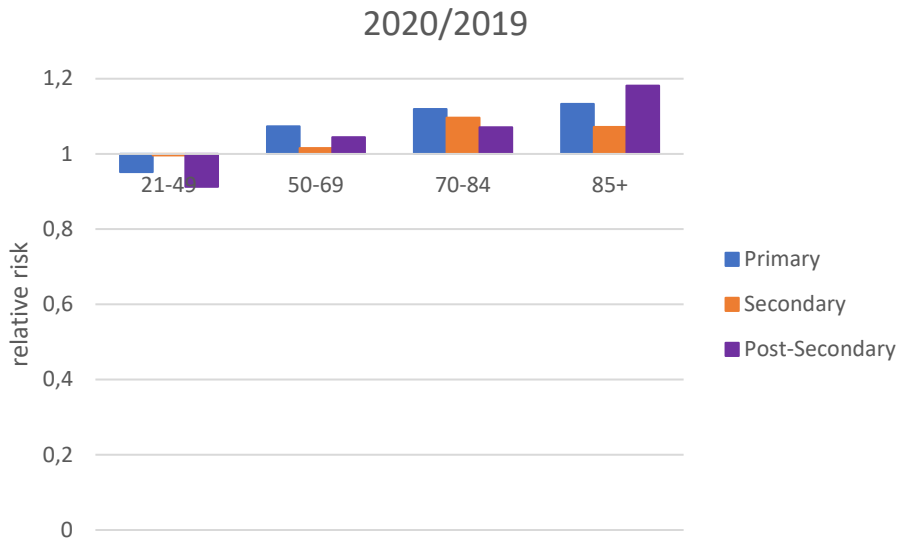


Figure 2b: Excess mortality for different combinations of age and education level (2020 vs 2019)



Calculations within SU's COVID-19 programme, data from Statistics Sweden

Figure 3a: Excess mortality for different combinations of age and country of birth (2020 vs 2017-2019)

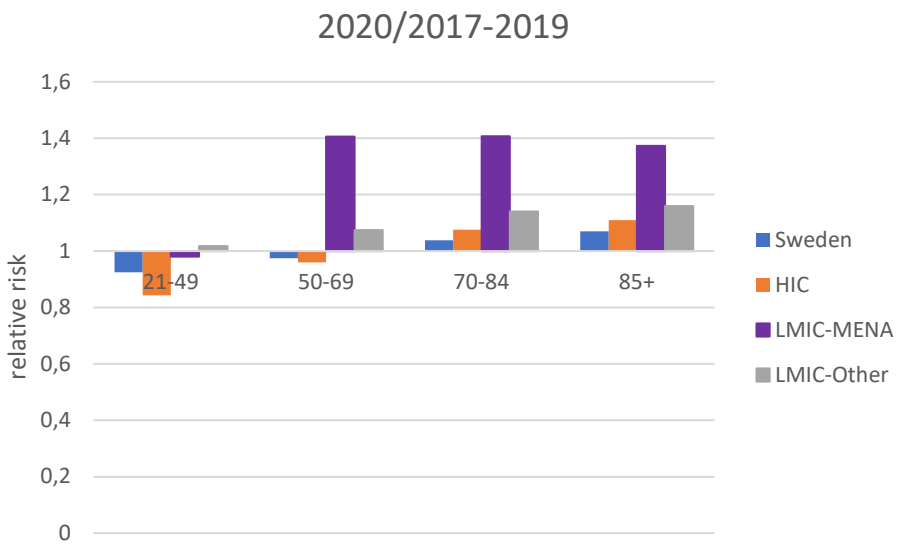
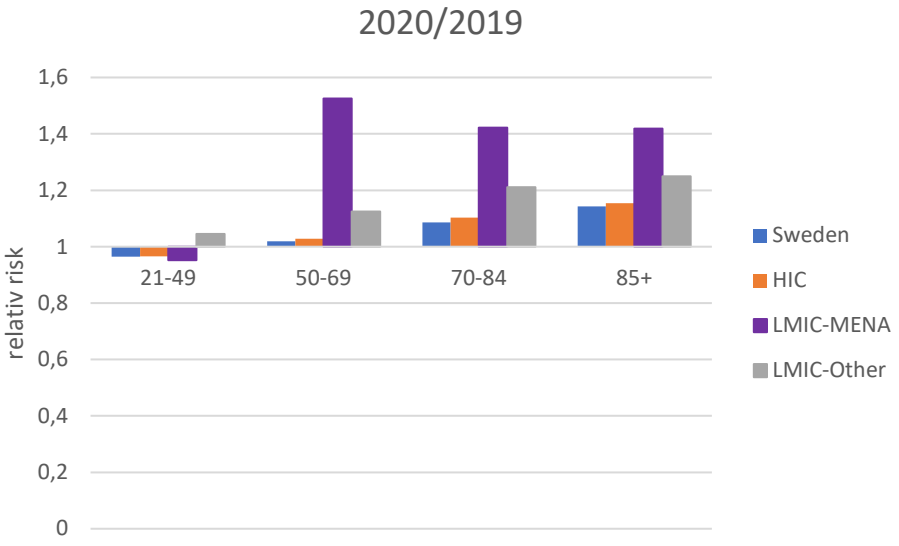


Figure 3b: Excess mortality for different combinations of age and country of birth (2020 vs 2019)



Calculations within SU's COVID-19 programme, data from Statistics Sweden

Mortality in COVID-19 in Sweden during March 2020-February 2021

In our multivariate analyses of mortality with COVID-19 as a contributing cause of death, as for the other outcomes we study, we report separate analyses for the age range 21-69 years and the age range 70 years and above. Of the 13,844 deaths included in our analyses, the vast majority, 91.4%, occurred in the older age range. In other words, age is a major contributor to mortality in COVID-19, as it is for mortality in more normal conditions: in our appendix tables we therefore also present descriptive statistics with data for a finer age distribution. Our multivariate analyses are otherwise done with a Cox regression where age is included as a continuous baseline variable and where the other variables modify the age-specific mortality risks in a multiplicative way. The fact that the model is multivariate means that the effects of the different variables hold when controlling for the composition with respect to all other variables that are also included in the model.

In our first figure, we present the results of the analyses for the age range 21-69 years, with 1,197 deaths during the 12-month period studied. To add nuance to the picture of corona-related mortality, we also report the patterns of mortality from other causes of death over the same time period. This is to distinguish whether COVID-19 mortality affected the same categories of individuals who experience high mortality also without the direct impact of the pandemic or whether there are factors that are specific to COVID-19.

The results are presented in two different model versions: in our Model 1 we include all socio-demographic variables, in an additional Model 2 we also add our medical variables to the analysis. Medical factors can be seen as more closely related than other factors to the outcome we are studying, and might therefore be expected to modify the effect of more distant socio-demographic background variables. It is therefore logical to examine what the risks of death look like both with and without taking into account the medical variables for which we have data.

We will use a similar logic also when presenting the results for the other outcomes we cover in our report, i.e. for our analyses of testing and morbidity.

Regarding the analyses of the risks of death and the factors related to higher or lower mortality from COVID-19 or other causes of death in the age group 21-69, we note the following.

Men have higher standardized mortality rates than women; their excess mortality in COVID-19 is even higher than that for other causes of death.

The patterns for the socio-economic variables are similar for COVID-19 mortality and other causes of death: mortality is highest for those with the lowest income and education level.

However, the patterns of mortality by country of birth differ markedly for COVID-19 and other causes of death. While foreign-born persons have a significantly lower mortality rate than Swedish- born persons in causes of death other than COVID-19, they stand out with a significantly higher mortality risk in COVID-19. This is particularly true for foreign-born persons from various low- and middle-income countries, where the risk of death in COVID-19 is more than twice as high as for persons born in Sweden.

In terms of family and housing situation, mortality is higher for those who are not married, this pattern is slightly stronger for other causes of death than for COVID-19 mortality. In contrast, our variable for crowding and living in a deprived neighborhood is

slightly stronger for COVID-19 mortality than for other causes of death.

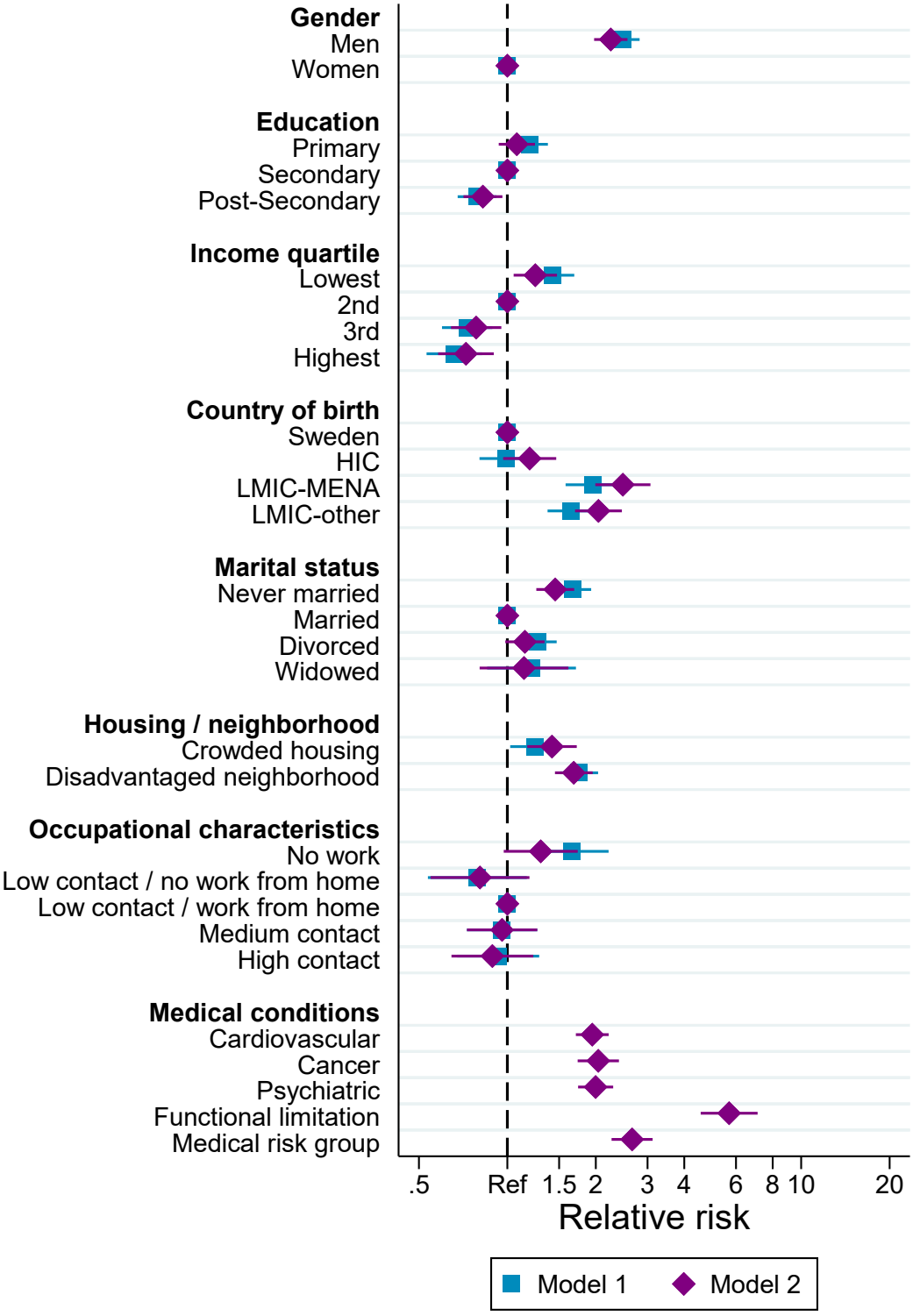
Type of occupation, as defined here, is not related to mortality from COVID-19 or other causes of death, but people who are not employed have higher mortality than others.

Finally, in our Model 2 we add our medical variables. The patterns of other variables then change only marginally. For the foreign-born, the risks of death become slightly higher when we take into account that in many cases they have a better underlying health and fewer medical diagnoses than the Swedish-born.

The patterns of COVID-19-related mortality and other mortality differ for two medical and health-related variables. Diagnosis with cancer is not as strongly related to COVID-19 mortality as to mortality in general. In contrast, people with a disability that causes them to receive care through the Support and Services Act have a significantly more elevated COVID-19 mortality than what holds for other causes of death.

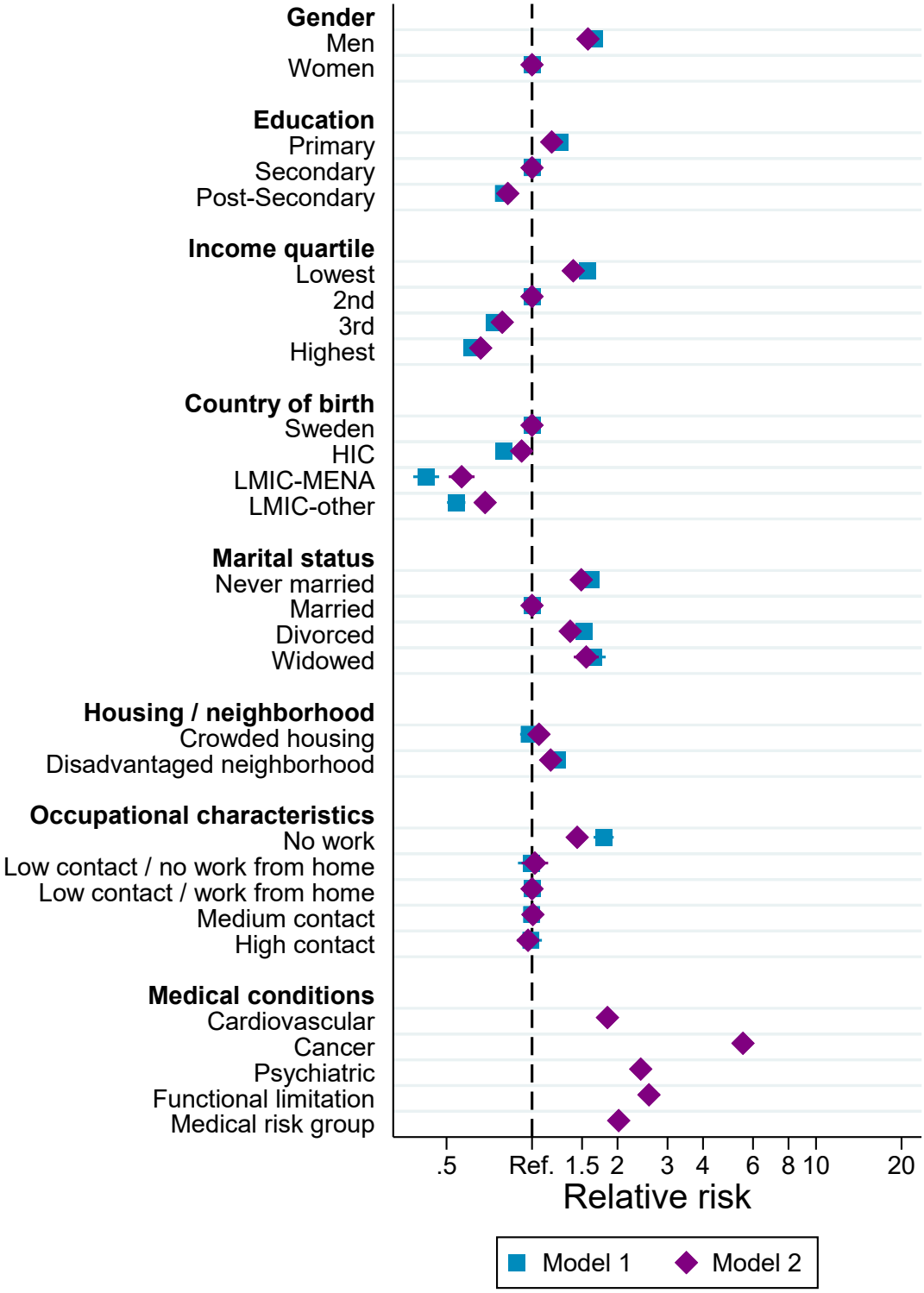
Separate analyses of the death risks during wave 1 and waves 2+3 of the pandemic show that the risk of death from causes other than COVID-19 does not differ between the two periods. For COVID-19-related mortality, the patterns look similar for all variables except for country of birth: excess mortality for the foreign-born was significantly lower in the final phase of the pandemic than in the spring months of 2020 (see separate analyses in our Appendix and the results in our next section on mortality among the elderly).

Figure 4a: Relative risks of death in COVID-19, March 2020-February 2021, ages 21-69



Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Figure 4b: Relative risks of death from causes other than COVID-19, March 2020-February 2021, ages 21-69



Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

As mentioned, most deaths in COVID-19 have occurred among people aged 70 and above. In our analyses of mortality among the elderly, we present results from three different models. As for the younger population, we have a Model 1 that mainly includes various structural and socio-demographic variables and a Model 2 that also takes into account various medical factors. For the elderly, we also have a Model 3 that more specifically takes into account care needs and underlying health by considering whether a person receives care at home through home care services or in an institutional setting. For older people, the following patterns of mortality hold over the 12 months we studied.

As with younger people, men have a higher mortality rate than women and men's excess mortality is even higher in COVID-19 than for other causes of death.

The socio-economic differences in mortality are less pronounced than at younger ages and are even weaker for COVID-19-related mortality than for other causes of death. For income quartiles among the elderly, there is no difference at all in COVID-19-related mortality risks.

However, as with younger people, there is significant excess mortality in COVID-19 among people born abroad, particularly those born in middle- or low-income countries who have significantly higher COVID-19-related death risks than other people. As with younger people, there is no corresponding excess mortality for the foreign-born in causes of death other than COVID-19.

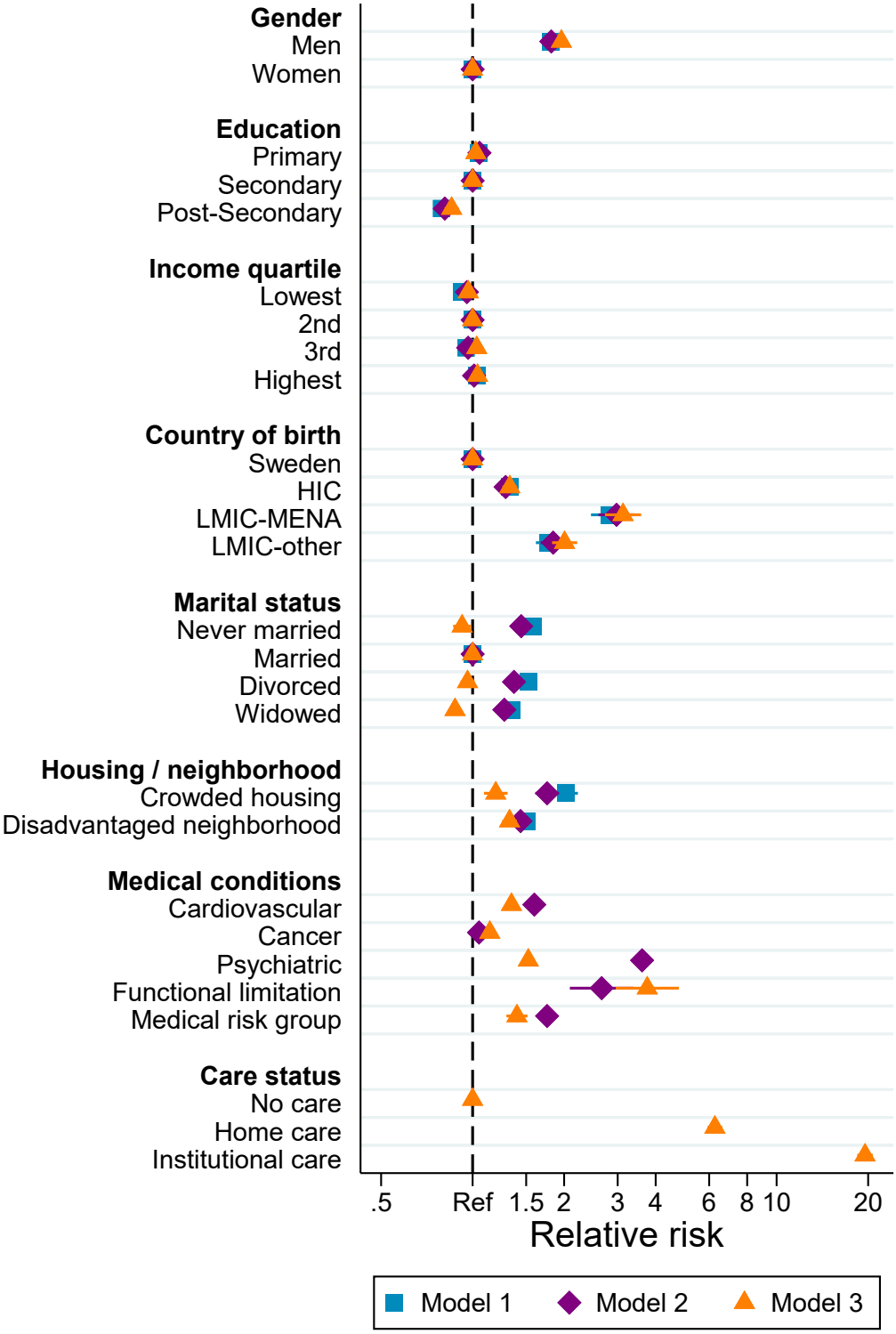
Our marital status variable initially shows that the risk of death is higher for those who are not married. This is true for both COVID-19-related mortality and other mortality, but the patterns change when we take into account whether a person receives home-care services or lives in institutional care. It is mainly single people who have such care arrangements.

Our crowding variable also initially shows a clear degree of excess mortality, but this is also largely due to the fact that some people in institutional accommodation are also classified as living in crowded conditions. However, once this is taken into account, there remains some effect of crowding on mortality in COVID-19 among older people. Living in a deprived area is also associated with some excess mortality in COVID-19.

As with the younger age group, a diagnosis of cancer is not significantly associated with COVID-19 mortality. However, a diagnosis of a mental illness is associated with increased mortality and with an impact that is greater for COVID-19-related mortality than for other causes of death. However, the effect is substantially reduced when we also take into account the level of care provided by home care services or in institutional care. For older people, this diagnosis often relates to dementia and many older people with such diagnoses have a range of care needs.

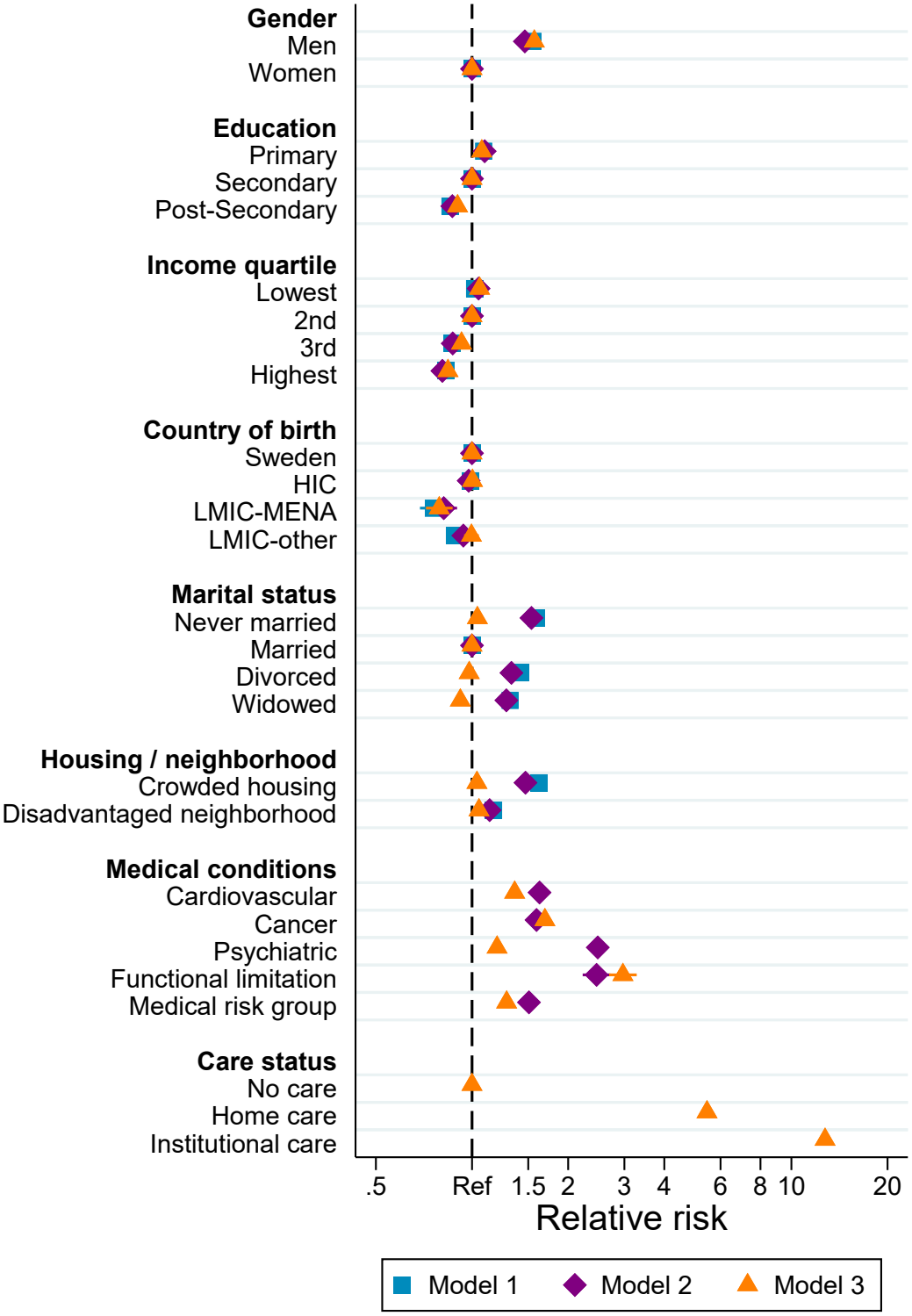
Our last variable is very strongly associated with mortality from both COVID-19 and other causes of death. Elderly people needing and receiving help from home care services have a mortality risk almost six times higher than other elderly people of comparable ages and with comparable other characteristics. Older people in institutional care have exceptionally high mortality risks and the excess mortality in COVID-19 has been even higher than for other causes of death. In the pandemic year we studied, the death risk from COVID-19 was almost 20 times higher for institutional residents than for older people without care services.

Figure 5a: Relative risks of death in COVID-19, March 2020-February 2021, ages 70+



Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

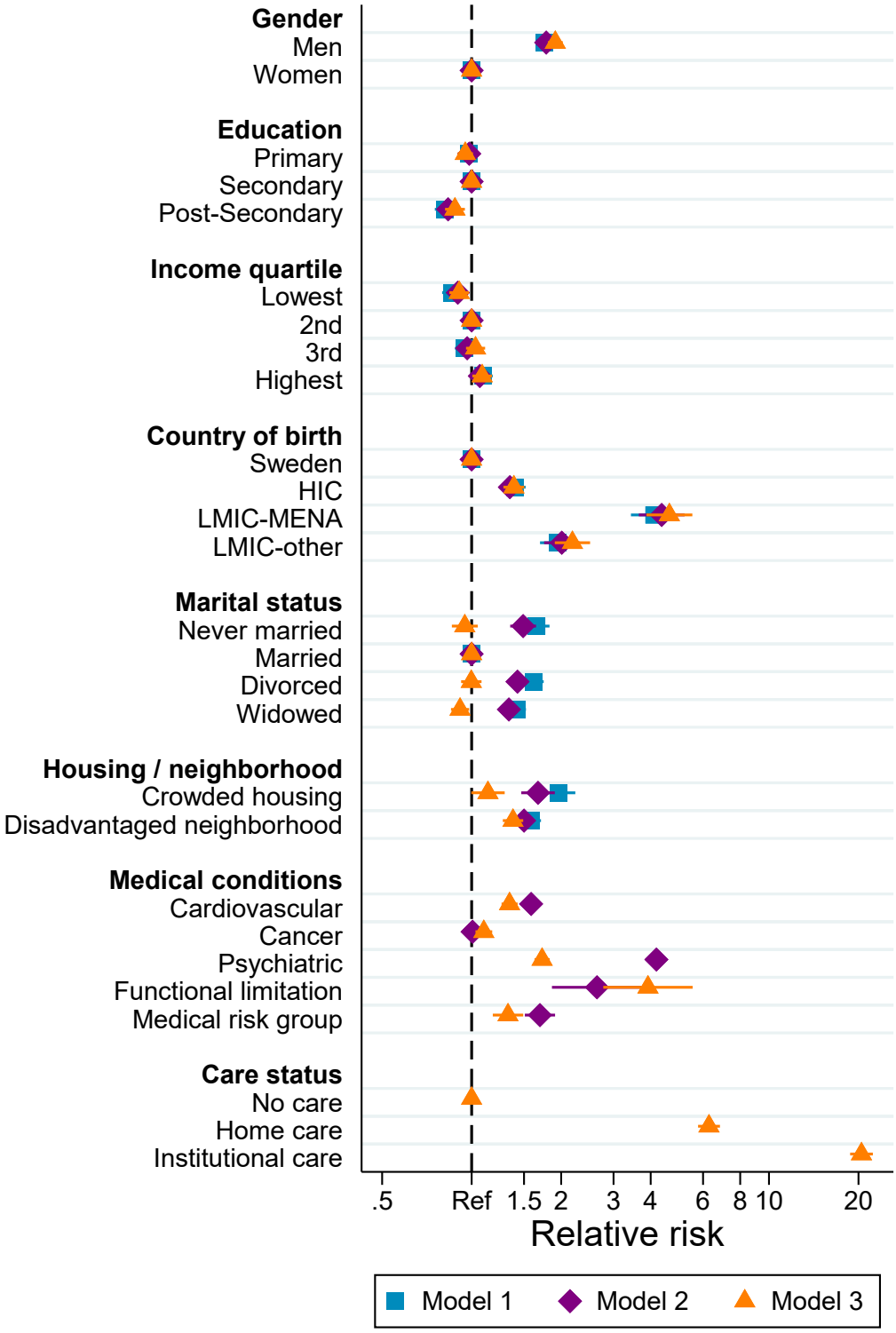
Figure 5b: Relative risks of death from causes other than COVID-19, March 2020-February 2021, ages 70+



Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

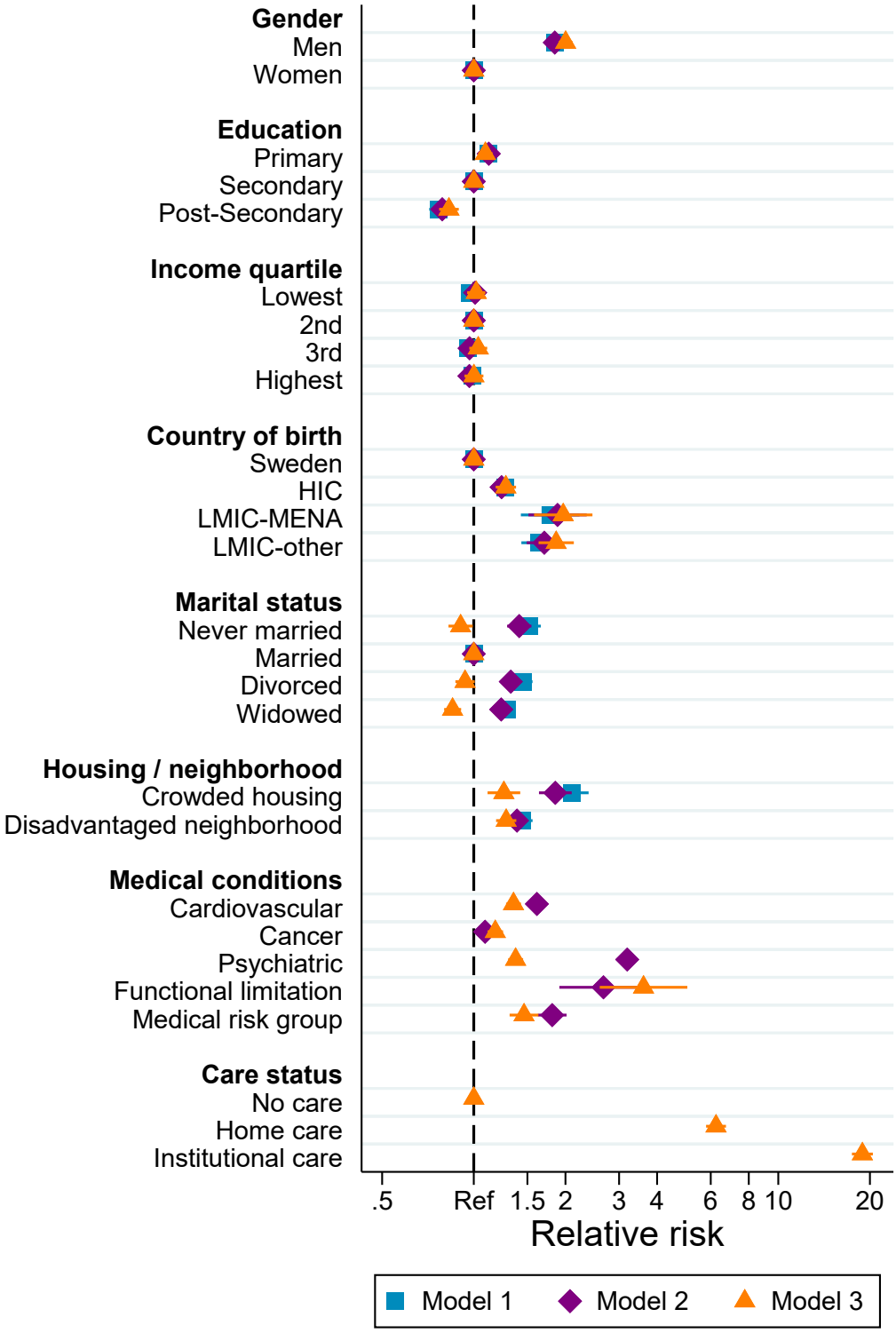
Because mortality has been so concentrated in the elderly, we also report our analyses with separate results for the spring-early summer 2020 period and the September 2020-February 2021 period. The mortality risks for causes of death other than COVID-19 are not at all different between the two periods and are therefore not reported here, but we do report our results for mortality in COVID-19. For most variables, the patterns here are also identical between the two periods but there is one noticeable divergence in patterns between the periods. Excess mortality among foreign-born people from a low- or middle-income country was significantly higher in the spring and early summer of 2020 than in the autumn and winter of 2020-2021. It is also worth noting that relative mortality among elderly people with institutional care was as high in the second and third waves of the pandemic as in its first phase.

Figure 6a: Relative risks of death in COVID-19, March 2020-August 2020, ages 70+



Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Figure 6b: Relative risks of death in COVID-19, September 2020-February 2021, ages 70+



Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Patterns in self-ordered PCR testing during March 2020-February 2021

We also had access to individual-level data on self-ordered PCR tests from Sweden's system of that kind, named 1177, and analyzed patterns of testing during the period we study. As the system of widespread testing and self-ordered tests did not come into operation until well into the pandemic, we only analyze the period as a whole. We had access to data on 1,630,357 tests ordered by 1,162,914 people during the period we are studying, the vast majority of which were ordered by people in the younger age range we are analyzing, i.e. people aged 21-69 years. In addition, many tests have been ordered in the period after February 2021 but are not included in our study.

In terms of testing, a person may have ordered several tests during the period we studied. We take this into account by presenting our analyses with the results of a Poisson regression where the outcome can be measured with multiple values. We have also performed the corresponding analyses with a Cox regression where the outcome is having ordered and completed a test at all during the period we study. However, the patterns for different variables in the two different analyses do not differ, and we therefore choose to present a Poisson regression in which we also include a more finely distributed variable for age.

The variables included are otherwise the same as in our other analyses, except that we do not have a variable for people with home care or in nursing homes. These people very rarely ordered their own PCR tests from the 1177 system.

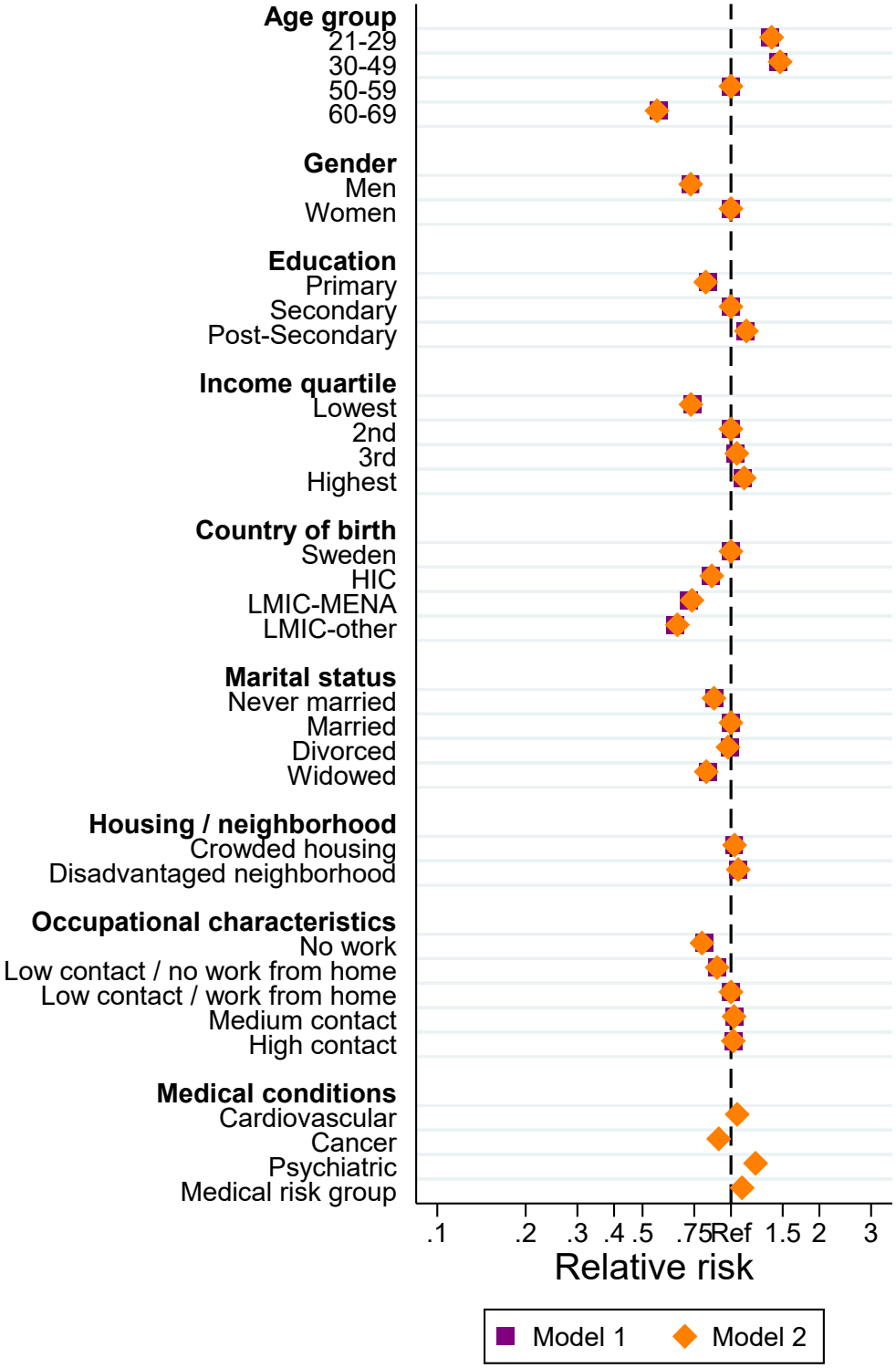
In many ways, the patterns of self-ordered PCR tests are directly opposite to those for mortality, i.e. groups with lower mortality have been more likely to order PCR tests and vice versa. This is particularly true for age. We have already noted that the vast majority of tests were ordered by people aged 21-69, but we also find a strong gradient within the two age ranges, with younger people being significantly more likely to test themselves than people of older ages. People aged 85 and above were extremely unlikely to order a PCR test from the 1177 system.

In contrast to patterns in mortality, we also find that women have a higher propensity for testing than men and that highly educated people and those with higher incomes have been more likely to perform a test than those with lower education or income.

In the younger age range, people born abroad were significantly less likely to order PCR tests than those born in Sweden, but this was not the case in the older age range where those born abroad, with higher risks of death, were also more likely to order tests from the 1177 system.

Married and divorced people were also slightly more likely than others to order PCR tests. However, living in a deprived area had no independent effect on the test propensity. The same was true for the type of occupation a person had and, to a large extent, the type of medical diagnoses a person had carried into the pandemic year.

Figure 7: Poisson regression of the number of self-ordered 1177 tests, 21-69 years



Calculations within SU's COVID-19 programme, data from Inera/1177, Statistics Sweden, National Board of Health and Welfare

Figure 8: Poisson regression of the number of self-ordered 1177 tests, 70+ years

Calculations within SU's COVID-19 programme, data from Inera/1177, Statistics Sweden, National Board of Health and Welfare

Positive cases of COVID-19 in Sweden, March 2020-February 2021

In our next section, we examine the incidence of positive test results for COVID-19 as recorded in the Public Health Agency's SmiNet database. Such positive cases may come from tests via the 1177 system but also from other parts of the healthcare system where people have been treated for COVID-19 or found to have COVID-19-related symptoms. However, the vast majority of positive cases come from the 1177 system and from people who have tested positive without having been in close contact with the health care system. In this part of the analysis, the observations of positive COVID-19 cases are also dominated by people in the age range 21-69 years. Of the 559,306 positive cases included, 89.5% originate from people in this age range. As testing rates were low in the spring and summer of 2020, the data are also dominated by positive cases observed in the period from September 2020 onwards. We thus report the analysis for the entire period of the pandemic year March 2020- February 2021.

The patterns of the propensity to being registered as a positive COVID-19 case differ somewhat from both what we observed for mortality and for the propensity to order a PCR test.

At younger ages, we find that women have been slightly more likely than men to have been found infected with COVID-19. A person's level of education does not correlate with the risk of infection, but on the other hand, people with higher incomes have been more likely than others to have been found infected with COVID-19.

Foreign-born people from a low- or middle-income country were also significantly more likely to be found infected with COVID-19, despite their lower propensity, at younger ages, to order their own PCR tests.

In terms of marital status, we find that married people are more likely than the non-married to be found infected with COVID-19. This may be due to their higher propensity to order tests and to the fact that they live with at least one other person. For the elderly, we also find an effect of living in a crowded household with more than one additional person and living in a vulnerable area. For the elderly, as in our Model 3, it is also important to control for the effect of receiving care through the home care service or in a special residence.

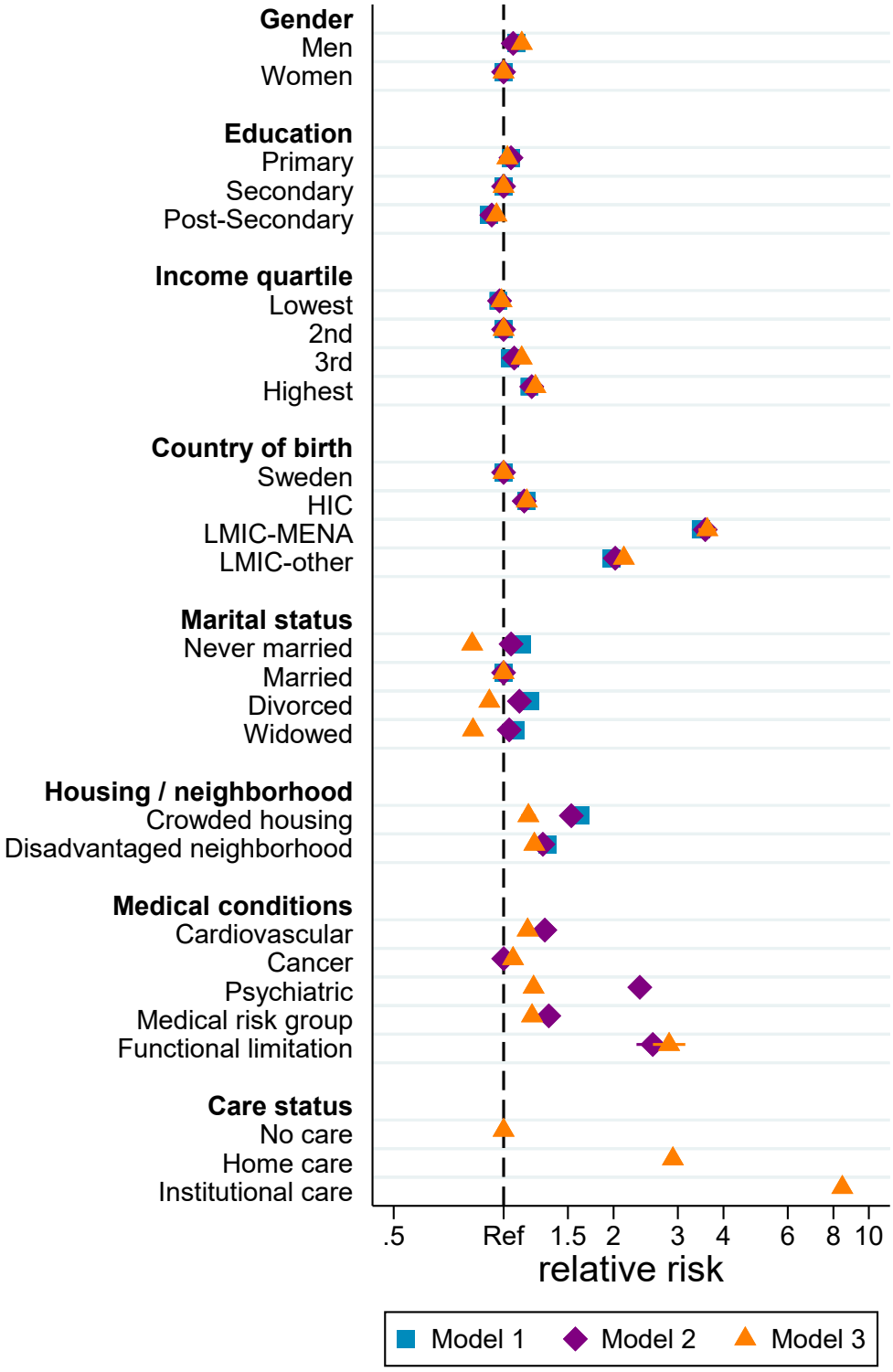
For people of working age, we find that those in occupations with a high degree of personal contact were also significantly more likely than others to be found infected by COVID-19, a relationship not matched by a higher rate of mortality for such people.

In terms of medical and care-related variables, we find that people with personal assistance (disability) and elderly people with home care or in nursing homes were also found to have positive cases of COVID-19 infection at a significantly higher rate than other people of similar ages. However, the patterns are weaker than for the gradients we observed for mortality. In this case, too, we find an effect of mental illness among the elderly that is largely captured by persons with care in a special residence.

Figure 9: Relative risks of positive case of COVID-19, March 2020-February 2021, ages 21-69 years

Calculations within SU's COVID-19 programme, data from SmiNet, Statistics Sweden, National Board of Health and Welfare

Figure 10: Relative risks of positive case of COVID-19, March 2020-February 2021, ages 70+



Calculations within SU's COVID-19 programme, data from SmiNet, Statistics Sweden, National Board of Health and Welfare

Hospital admissions with COVID-19 in Sweden during March 2020-February 2021

In this section, we analyze data on 38,949 cases of hospital admissions with a COVID-19 diagnosis. About half of the admissions were among people aged 21-69 years and the other half among people aged 70 years or older. As in our previous analyses, we relate hospital admissions to the population at risk in order to study which individual-level factors that were related to a higher or lower propensity to be hospitalized with more severe COVID-19 symptoms. Again, the patterns for the different sub-periods look very similar and we therefore present the results for the summed period we studied.

For hospitalizations, as for mortality, we find that men were significantly more likely than women to be hospitalized with a diagnosis of COVID-19.

We find no differences between people in different income categories, but people with a high level of education were less likely than others to be admitted to hospital.

As with mortality patterns, we find that foreign-born people from low- and middle-income countries were significantly more likely than others to be admitted to hospital. Their propensity to be admitted to hospital was not significantly affected by factors related to underlying health (Model 2 vs. Model 1).

Among people older than 70, we find that unmarried people were more likely than the married to become hospitalized for COVID-19 (Model 1), but that this effect disappears when we take into account that the unmarried at those ages were more often than others in need of care from home care services or in a care home (Model 3).

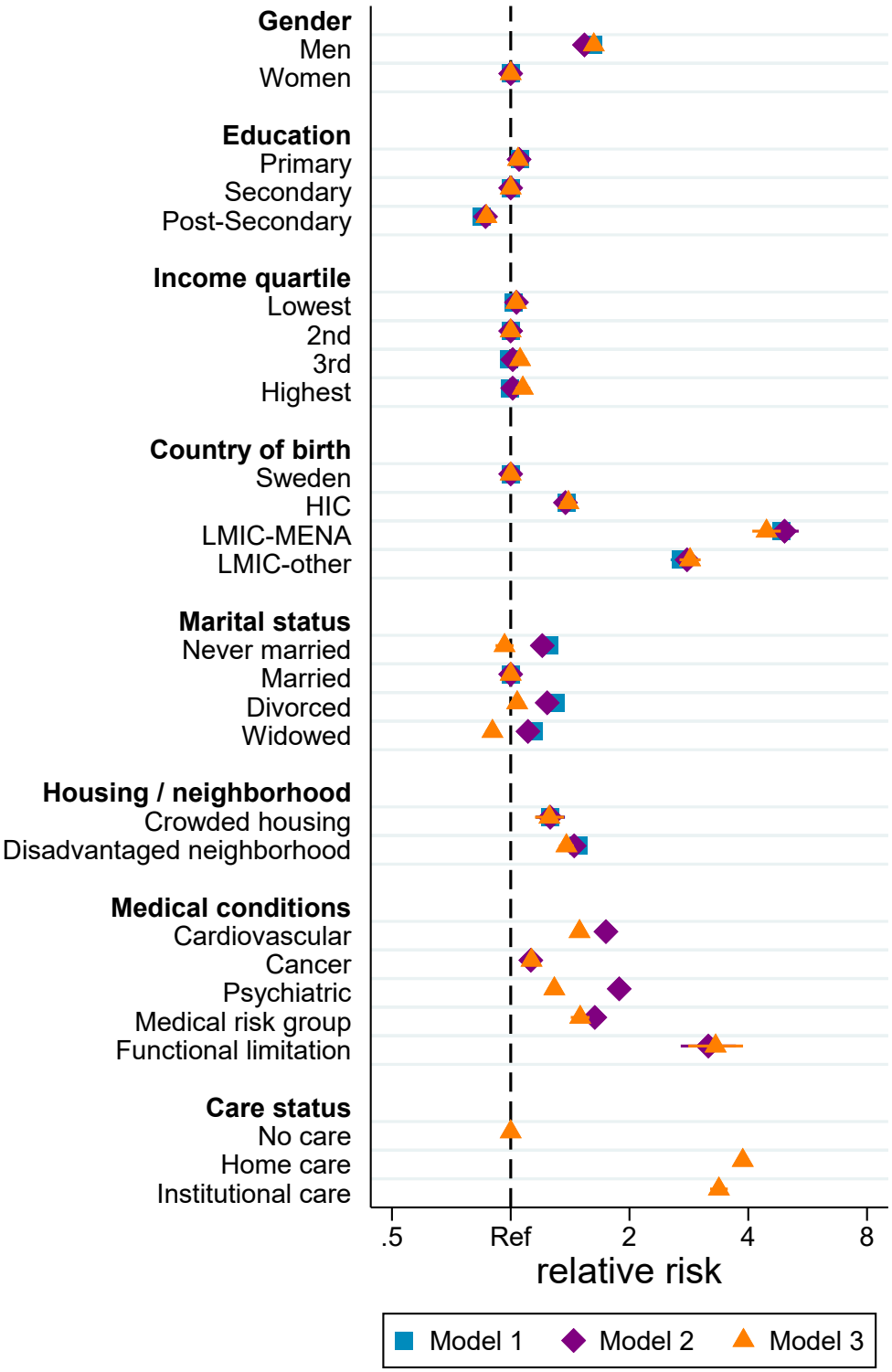
In the analysis of hospital admissions, we find that both crowded living and living in a vulnerable area are associated with a higher risk of getting hospitalized. People of working age with an occupation with high personal contact also had a higher risk of becoming hospitalized with COVID-19.

Except for cancer, the various medical diagnoses that we were able to consider were also associated with a higher risk of being hospitalized with a COVID-19 diagnosis. People with a disability (ages 21-69) or with special housing (ages 70+) have had particularly strong excess risks of serious illness leading to hospitalization. However, the excess risk of hospitalization for elderly people in care homes is significantly lower than the excess risk of mortality for these people.

Figure 11: Relative risks of admission to hospital with COVID-19 diagnosis, March 2020-February 2021, ages 21-69 years

Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Figure 12: Relative risks of admission to hospital with COVID-19 diagnosis, March 2020-February 2021, ages 70+



Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

ICU episodes with COVID-19 in Sweden during March 2020-February 2021

In our final section, we analyze 4,992 ICU episodes, i.e. the risk of becoming so seriously ill in COVID-19 that a person was admitted to an intensive care unit. ICU episodes were more common for people in the 21-69 age range than for people aged 70 or older during the period we study: about two-thirds of ICU episodes are recorded for people in the younger age range.

The patterns of risks of being admitted to intensive care do not differ significantly from those observed for hospital admissions and mortality in COVID-19. We find clear excess risks of being male compared to female and a gradient in educational attainment where higher levels of education are associated with lower risks of being admitted to intensive care.

As with mortality and hospitalization, we find strong excess risks for foreign-born people from low- and middle-income countries, but no significant effect of income level or marital status. A breakdown by sub-periods of the pandemic year shows that the excess risks for ICU hospitalizations among the foreign-born were lower in the period September 2020-February 2021 than during the first wave of the pandemic (not shown with separate graphs).

Crowded housing and living in a deprived area constitute risk factors for intensive care with COVID-19, as is having an occupation with a high degree of personal contact - or no work at all at ages 21-69.

People aged 21-69 with a disability/personal assistance had an increased risk of COVID-19-related intensive care but this is not the case for people aged 70 and above who have been living in a care home. Instead, these people had a lower propensity than other people of comparable ages and characteristics to be admitted for intensive care.

Figure 13: Relative risks of intensive care, March 2020-February 2021, ages 21-69

Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Figure 14: Relative risks of intensive care, March 2020-February 2021, ages 70+

Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Summary

Our study provides an overview of the various individual-level factors of people in Sweden that have contributed to higher or lower levels of COVID-19-related morbidity and mortality during the pandemic year March 2020-February 2021. Many of the risk factors for increased COVID-19 morbidity and mortality are ones that are also normally associated with elevated morbidity and mortality. It is not entirely straightforward to show associations that appear unique to COVID-19 or that may be indicative of different types of maladaptive conditions that prevailed during the pandemic year. However, among others we note the following patterns which we find particularly interesting and noteworthy.

Patterns of test behavior

The patterns of ordering PCR tests from the Swedish regions' 1177 systems are in many ways mirrored in an opposite way by the patterns we find for mortality. To some extent, this can be interpreted as a manifestation of what is commonly referred to as a morbidity-mortality paradox, i.e. that those population groups that are more likely than others to be attentive to various disease symptoms also tend to have lower mortality rates. The paradox is usually explained by the fact that people who are more likely to be aware of disease symptoms at an earlier stage have a lifestyle in general that is associated with a higher awareness of health-related factors. Such an explanation also fits well with the testing behavior we find, where a higher propensity to test may be associated with earlier detection and response to symptoms associated with COVID-19 infection.

An alternative interpretation of the patterns we find may be that some populations with elevated morbidity and mortality in COVID-19 and low levels of testing have been prevented from ordering tests because the 1177 system may have been perceived as overly complicated. This may apply to foreign-born people with less Swedish-language skills, but also to people with low levels of education and to the very oldest who may not always have the digital skills to order a test from the app-based 1177 system.

An obvious shortcoming of the mass testing system is that it came into operation rather late in the pandemic year. For the first wave of the pandemic in the spring of 2020, we therefore have hardly any self-ordered tests to analyze. For our analyses, this also means that we cannot draw any far-reaching conclusions about how patterns of transmission may have changed during the different phases of the pandemic year, other than what is revealed by hospitalizations and deaths that primarily affect the elderly population.

Cases of confirmed infection

In terms of patterns of positive cases of confirmed COVID-19 infection, as revealed by tests ordered through the 1177 system and positive test results obtained from patients in the health care system, we find that they are only partially consistent with the patterns we find for COVID-19-related morbidity and mortality. In contrast to the patterns of morbidity and mortality, we find, for example, that younger people, women, and people of high socioeconomic status had an increased risk of being registered as infected by COVID-19. To some extent, such excess risk may be related to the fact that such people were also more likely than others to order tests from the 1177 system, sometimes perhaps with rather mild

symptoms. Other associations that we can link more directly to actual transmission are that people in occupations with a high degree of personal contact were more often than others registered with a positive test result. Such individuals have also had a higher rate of hospitalization with a COVID-19 diagnosis, but the increased morbidity of these individuals is not matched by an increased mortality from COVID-19 (cf. Billingsley et al. 2021).

In contrast, one group with a high level of positive test results and which also had significantly elevated risks of morbidity and mortality associated with COVID-19 is that of foreign-born persons with a low- or middle-income country background. The patterns of the foreign-born from such countries are some of the most remarkable that we find. We find that high risks of mortality and morbidity for the foreign-born are also matched by high levels of positive infection rates, but otherwise we find no support for many of the assumptions about the high mortality rates of the foreign-born that have been circulated in Swedish and international debate (see next section).

High morbidity and mortality among the foreign-born

Thus, in terms of morbidity and mortality, we find remarkably elevated risks for foreign-born individuals with a low- or middle-income country background, and particularly high risks for foreign-born individuals from the Middle East and North Africa. The gradients are slightly higher for patterns of hospitalization than for mortality, which does not suggest that the foreign-born receive hospital care to a lesser extent than the Swedish-born. There is also no support for the proposition that the foreign-born had poorer underlying health that made them more vulnerable to COVID-19-related morbidity and mortality, at least as measured by the variables we had available. On the contrary, when we control for various underlying diagnoses, we find that the foreign-born had fewer such conditions and that their mortality from causes of death other than COVID-19 was lower than that of the Swedish-born. Finally, we find that the elevated levels of COVID-19-related morbidity and mortality persist when we control for such structural factors as socioeconomic status, living arrangements and occupational status involving a high degree of personal contact. Such socioeconomic factors may explain some of the excess mortality we find (Rostila et al. 2021) but the vast majority remains unexplained.

It remains to be speculated whether there are other possible reasons for the increased infection, morbidity and mortality among the foreign-born. To a large extent, the spread of infection can be linked geographically to patterns that are often more or less random in nature. Infectiousness is based, inter alia, on geographical and personal contacts and naturally makes people with access to international networks more exposed to different routes of infection. Such a pattern is also evident geographically in Sweden, where the Stockholm region was significantly more exposed than other regions in spring 2020, and among countries in Europe and other parts of the world, where countries that were not affected at all in spring 2020 were among the most severely affected in the later phases of the pandemic. That such geographical factors may be important is supported by our observations that excess mortality among the foreign-born was significantly lower in the second and third waves of the pandemic year than in spring 2020. Other possible explanations, such as that patterns of social distancing in close family relationships may not always have been as prominent among the foreign-born as among the Swedish-born, cannot be tested with the available data. Furthermore, a study that examined mortality in couples with a Swedish-born and a foreign-born person provides very weak support for the

hypothesis that lack of Swedish-language skills and any related lack of awareness of public-health recommendations would be an explanatory factor for the higher mortality of the foreign-born (Aradhya et al. 2021).

Poor underlying health and high mortality

For many of the other individual background factors that we have been able to study, we find patterns in excess risk of COVID-19-related morbidity and mortality that are similar to those we know to be associated with higher levels of morbidity and mortality even under more normal conditions than those that prevailed during the pandemic. Such patterns of excess risk suggest that frailty and poor underlying health are risk factors for elevated morbidity and mortality also in the context of viral attacks during a pandemic. We find that many of the patterns in COVID-19-related mortality also hold for mortality from causes of death other than those that we have been able to link to COVID-19. Mortality from different causes of death is of course not entirely independent of each other, but a comparison with patterns in mortality in the years immediately preceding the pandemic shows that these are not significantly different from what we have been able to report here for non-COVID-19-related mortality in the pandemic year (Drefahl et al. 2020).

High mortality for people with care needs

A further relationship that emerges as particularly noteworthy is that of the high risks of morbidity and mortality among people receiving various types of care in institutions or in their own homes. This is particularly the case for older people who have been resident with care in specialized institutions, but also for older people with care provided by home care services and younger people with a disability which means that they have also had various care services linked to their accommodation. About three quarters of all deaths with COVID-19 occurred to older people in care homes (44% of deaths) or with home care (30% of deaths). Excess mortality among older people in institutional care has been well known, but the actual magnitude of such excess mortality over the full pandemic year and in relation to other individual background factors has not (Modig et al. 2021). For an accurate analysis, it is essential to have information on the *de facto* living situation of the elderly with different care interventions, as many of the elderly in institutional care are not registered as formally living there (Brandén et al. 2020).

In our analyses, we find an almost 20-fold higher risk of COVID-19-related mortality among elderly people in institutional care during the pandemic year. Residents of nursing homes generally have underlying diseases that make them frail, and mortality from other causes of death is therefore also significantly higher than for other elderly people of similar ages but without care services. Despite visitation restrictions, rapid and widespread spread of infection among older people in institutions, with their many other residents and high level of staff contact, has made such people particularly vulnerable to increased risk of illness and death. Their excess risk of mortality was not significantly lower in the second and third waves of the pandemic than in the first wave. Many of the deaths that occurred in care homes were due in relation to palliative care without the involvement of other parts of the health care system: the excess risk of hospitalization was significantly lower than the excess risk of dying in the context of COVID-19, and in the case of episodes of intensive care,

people with institutional housing had a lower risk than other older people of being treated in intensive care.

Excess mortality and under-mortality

Like other countries around the world, Sweden has come through a year of significant excess mortality in the wake of COVID-19. In Sweden, excess mortality was at its highest in April and December 2020. Unlike many other parts of the world, the statistics on excess mortality levels are fairly consistent with the statistics on deaths recorded with COVID-19 as a contributing cause of death (Kolk et al. 2021). So far, it appears that the various indirect effects of the pandemic on patterns and levels of mortality have been quite limited. Despite this, we do indeed also find some degree of under-mortality during the pandemic year: this applies to people of younger ages where mortality is also normally relatively low. Changes in living conditions during the pandemic seem to have contributed to more protected living situations that were associated with a slightly lower level of mortality for different groups of younger adults. In addition, changing patterns of living have brought about a whole range of behavioral changes with implications for many different aspects of life, many of which are likely to continue to make their mark on our lives for a long time to come.

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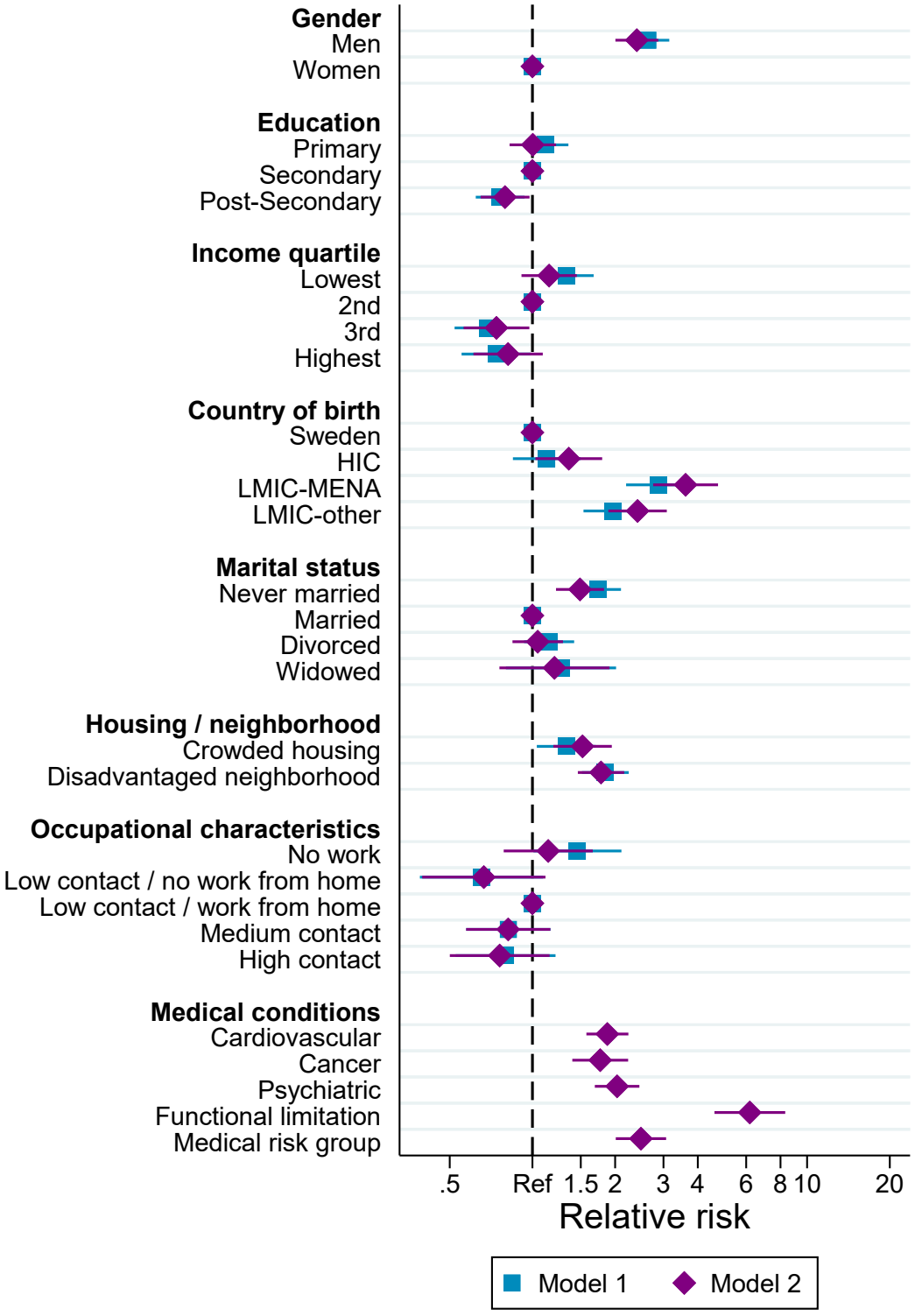
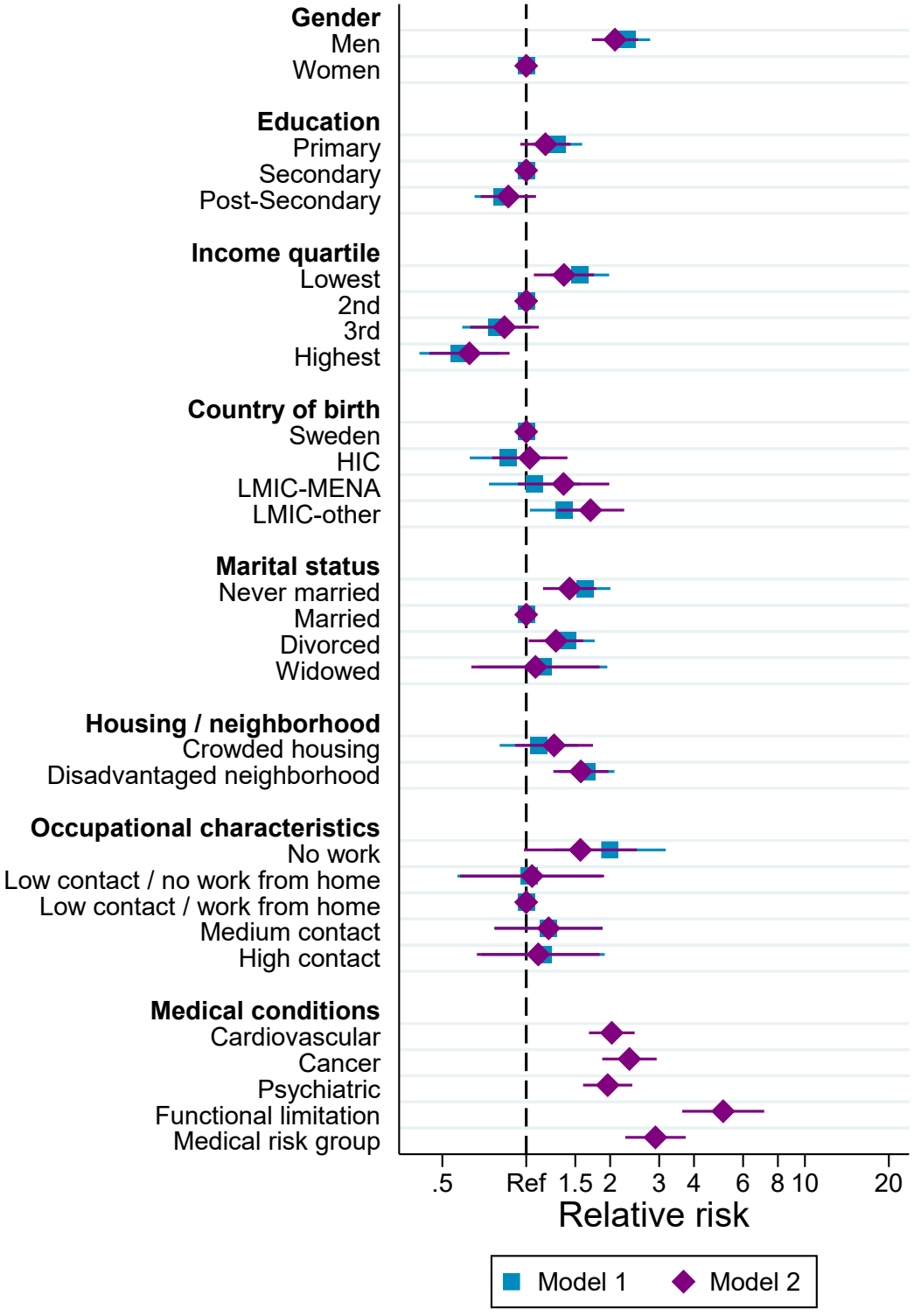
Appendix: Figure A1

Figure A1a: Relative risks of death in COVID-19, March-August 2020, ages 21-69



Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Figure A1b: Relative risks of death in COVID-19, September 2020-February 2021, ages 21-69



Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Appendix: Appendix tables

Part 1: Coefficients from estimated models as basis for Figures 4-13

Part 2: Univariate incidence rates for age groups 21-49, 50-69, 70-84, and 85+ years

Part 1: Coefficients from estimated models as basis for Figures 4-13

Cox-regression: Relative risks of death from Covid-19, March 2020-February 2021 (Figures 4a and 5a)

	Ages 21-69		Ages 70+		
	Model 1 Relative risk [95%-CI]	**Model 2 Relative risk [95%-CI]**	**Model 1 Relative risk [95%-CI]**	**Model 2 Relative risk [95%-CI]**	**Model 3 Relative risk [95%-CI]**
Gender					
Men	2.47 [2.17,2.82]	2.25 [1.97,2.56]	1.80 [1.73,1.88]	1.81 [1.74,1.89]	1.96 [1.88,2.04]
Women	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
Education					
Primary	1.19 [1.04,1.37]	1.08 [0.93,1.24]	1.05 [1.01,1.09]	1.05 [1.01,1.10]	1.02 [0.98,1.07]
Secondary	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
Post-secondary	0.79 [0.68,0.92]	0.83 [0.71,0.96]	0.79 [0.75,0.83]	0.81 [0.77,0.85]	0.85 [0.81,0.90]
Income quartile					
Lowest	1.43 [1.21,1.69]	1.24 [1.05,1.48]	0.92 [0.87,0.97]	0.96 [0.91,1.01]	0.97 [0.92,1.02]
2nd	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
3rd	0.73 [0.60,0.89]	0.78 [0.64,0.95]	0.95 [0.91,1.00]	0.97 [0.92,1.02]	1.03 [0.98,1.08]
Highest	0.66 [0.53,0.82]	0.72 [0.58,0.90]	1.03 [0.98,1.09]	1.01 [0.96,1.07]	1.04 [0.99,1.09]
Country of birth					
Sweden	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
HIC	0.99 [0.80,1.23]	1.19 [0.97,1.47]	1.33 [1.26,1.40]	1.28 [1.21,1.36]	1.33 [1.25,1.40]
LMIC-MENA	1.96 [1.58,2.44]	2.47 [1.99,3.07]	2.81 [2.45,3.23]	2.97 [2.59,3.41]	3.12 [2.72,3.58]
LMIC-other	1.65 [1.37,1.98]	2.04 [1.70,2.45]	1.78 [1.61,1.96]	1.84 [1.67,2.03]	2.01 [1.82,2.21]
Marital Status					
Never married	1.67 [1.45,1.93]	1.46 [1.25,1.69]	1.58 [1.48,1.69]	1.44 [1.35,1.55]	0.92 [0.86,0.99]
Married	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
Divorced	1.26 [1.09,1.47]	1.15 [0.98,1.34]	1.52 [1.44,1.61]	1.37 [1.30,1.44]	0.96 [0.91,1.02]
Widowed	1.21 [0.85,1.71]	1.14 [0.80,1.61]	1.34 [1.28,1.41]	1.27 [1.21,1.33]	0.88 [0.84,0.92]

Housing / neighborhood					
Crowded housing	1.24 [1.02,1.51]	1.42 [1.17,1.72]	2.03 [1.85,2.22]	1.76 [1.61,1.92]	1.19 [1.09,1.30]
Disadvantaged neighborhood	1.75 [1.51,2.04]	1.68 [1.45,1.95]	1.51 [1.42,1.59]	1.44 [1.36,1.52]	1.32 [1.25,1.40]
Occupational characteristics					
No work	1.66 [1.25,2.21]	1.30 [0.97,1.74]			
Low contact / no work from home	0.79 [0.54,1.16]	0.81 [0.55,1.19]			
Low contact / work from home	1.00 [1.00,1.00]	1.00 [1.00,1.00]			
Medium contact	0.96 [0.73,1.26]	0.96 [0.73,1.26]			
High contact	0.93 [0.68,1.28]	0.89 [0.65,1.23]			
Medical conditions					
Cardiovascular		1.95 [1.71,2.21]		1.60 [1.53,1.66]	1.34 [1.29,1.40]
Cancer		2.04 [1.73,2.40]		1.05 [1.01,1.10]	1.14 [1.09,1.19]
Psychiatric		2.00 [1.74,2.29]		3.61 [3.48,3.75]	1.53 [1.46,1.59]
Medical risk group		2.66 [2.26,3.12]		1.76 [1.62,1.90]	1.40 [1.29,1.52]
Functional limitation		5.69 [4.55,7.11]		2.66 [2.09,3.38]	3.75 [2.96,4.77]
Care status					
No care					1.00 [1.00,1.00]
Home care					6.27 [5.92,6.63]
Institutional care					19.54 [18.42,20.72]

CI: Confidence Interval; HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's covid-19 program, data from SmiNet, Statistiska centralbyrån, Socialstyrelsen

Cox-regression: Relative risks of death from causes other than Covid-19 (Figures 4b and 5b)

	Ages 21-69		Ages 70+		
	Model 1 Relative risk [95%-CI]	Model 2 Relative risk [95%-CI]	Model 1 Relative risk [95%-CI]	Model 2 Relative risk [95%-CI]	Model 3 Relative risk [95%-CI]
Gender					
Men	1.66 [1.60,1.72]	1.57 [1.52,1.63]	1.55 [1.53,1.58]	1.46 [1.44,1.49]	1.57 [1.54,1.59]
Women	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
Education					
Primary	1.25 [1.20,1.31]	1.17 [1.12,1.22]	1.09 [1.07,1.11]	1.10 [1.08,1.11]	1.07 [1.06,1.09]
Secondary	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
Post-secondary	0.79 [0.76,0.83]	0.82 [0.79,0.86]	0.85 [0.83,0.87]	0.87 [0.85,0.89]	0.90 [0.88,0.92]
Income quartile					
Lowest	1.56 [1.49,1.64]	1.40 [1.33,1.47]	1.02 [1.00,1.04]	1.05 [1.03,1.07]	1.06 [1.03,1.08]
2nd	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
3rd	0.73 [0.70,0.78]	0.79 [0.74,0.83]	0.87 [0.85,0.88]	0.87 [0.85,0.89]	0.93 [0.91,0.95]
Highest	0.61 [0.58,0.65]	0.66 [0.62,0.70]	0.83 [0.81,0.85]	0.81 [0.79,0.83]	0.84 [0.82,0.86]
Country of birth					
Sweden	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
HIC	0.80 [0.75,0.85]	0.92 [0.86,0.98]	0.99 [0.96,1.01]	0.98 [0.95,1.00]	1.00 [0.98,1.03]
LMIC-MENA	0.42 [0.38,0.47]	0.57 [0.51,0.63]	0.76 [0.69,0.83]	0.82 [0.74,0.90]	0.79 [0.72,0.87]
LMIC-other	0.54 [0.50,0.58]	0.68 [0.63,0.74]	0.88 [0.83,0.93]	0.94 [0.89,0.99]	1.00 [0.94,1.05]
Marital Status					
Never married	1.61 [1.54,1.68]	1.49 [1.43,1.56]	1.59 [1.55,1.64]	1.54 [1.49,1.58]	1.04 [1.01,1.07]
Married	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
Divorced	1.52 [1.45,1.59]	1.36 [1.30,1.43]	1.42 [1.39,1.45]	1.33 [1.30,1.36]	0.98 [0.96,1.00]
Widowed	1.64 [1.48,1.82]	1.55 [1.40,1.72]	1.32 [1.29,1.34]	1.28 [1.26,1.31]	0.92 [0.90,0.94]
Housing / neighborhood					
Crowded housing	0.98 [0.91,1.05]	1.06 [0.98,1.14]	1.62 [1.55,1.70]	1.47 [1.41,1.54]	1.04 [0.99,1.08]
Disadvantaged neighborhood	1.23 [1.16,1.29]	1.16 [1.10,1.23]	1.17 [1.14,1.20]	1.14 [1.11,1.17]	1.05 [1.02,1.08]

Occupational characteristics				
No work	1.79 [1.65,1.94]	1.44 [1.33,1.57]		
Low contact / no work from home	0.99 [0.89,1.11]	1.02 [0.92,1.14]		
Low contact / work from home	1.00 [1.00,1.00]	1.00 [1.00,1.00]		
Medium contact	1.00 [0.92,1.08]	1.01 [0.93,1.09]		
High contact	0.99 [0.91,1.08]	0.97 [0.89,1.06]		
Medical conditions				
Cardiovascular		1.84 [1.77,1.92]	1.63 [1.60,1.66]	1.36 [1.34,1.38]
Cancer		5.53 [5.31,5.76]	1.59 [1.57,1.62]	1.69 [1.66,1.72]
Psychiatric		2.41 [2.32,2.51]	2.48 [2.43,2.52]	1.20 [1.18,1.22]
Medical risk group		2.02 [1.92,2.12]	1.51 [1.46,1.56]	1.28 [1.24,1.32]
Functional limitation		2.58 [2.37,2.81]	2.46 [2.22,2.71]	2.97 [2.69,3.28]
Care status				
No care				1.00 [1.00,1.00]
Home care				5.44 [5.33,5.56]
Institutional care				12.75 [12.45,13.06]

CI: Confidence Interval; HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's covid-19 program, data from SmiNet, Statistiska centralbyrån, Socialstyrelsen

Poisson regression: number of self-ordered 1177 tests (Figures 7 and 8)

	Ages 21-69		Ages 70+	
	Model 1 Relative risk [95%-CI]	**Model 2 Relative risk [95%-CI]**	**Model 1 Relative risk [95%-CI]**	**Model 2 Relative risk [95%-CI]**
Age group				
21-29	1.36 [1.35,1.36]	1.38 [1.37,1.38]		
30-49	1.45 [1.45,1.46]	1.47 [1.46,1.48]		
50-59	1.00 [1.00,1.00]	1.00 [1.00,1.00]		
60-69	0.57 [0.56,0.57]	0.56 [0.56,0.56]		
70-84			1.00 [1.00,1.00]	1.00 [1.00,1.00]
85+			0.14 [0.13,0.15]	0.14 [0.13,0.15]
Gender				
Men	0.73 [0.73,0.73]	0.73 [0.73,0.73]	0.85 [0.84,0.87]	0.85 [0.83,0.87]
Women	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
Education				
Primary	0.83 [0.83,0.84]	0.82 [0.82,0.83]	0.67 [0.65,0.68]	0.67 [0.65,0.69]
Secondary	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
Post-secondary	1.12 [1.12,1.12]	1.13 [1.12,1.13]	1.38 [1.35,1.41]	1.38 [1.35,1.41]
Income quartile				
Lowest	0.74 [0.74,0.75]	0.73 [0.73,0.73]	0.77 [0.74,0.80]	0.77 [0.74,0.80]
2nd	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
3rd	1.04 [1.03,1.04]	1.05 [1.04,1.05]	1.36 [1.32,1.40]	1.36 [1.32,1.40]
Highest	1.10 [1.09,1.10]	1.11 [1.10,1.11]	1.84 [1.79,1.89]	1.84 [1.79,1.89]
Country of birth				
Sweden	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
HIC	0.85 [0.85,0.86]	0.86 [0.85,0.87]	0.97 [0.93,1.00]	0.97 [0.93,1.00]
LMIC-MENA	0.72 [0.71,0.73]	0.74 [0.73,0.74]	2.39 [2.20,2.60]	2.40 [2.20,2.61]
LMIC-other	0.65 [0.64,0.65]	0.66 [0.65,0.66]	1.22 [1.15,1.30]	1.22 [1.15,1.30]

Marital Status				
Never married	0.88 [0.88,0.88]	0.88 [0.87,0.88]	0.69 [0.67,0.72]	0.69 [0.67,0.72]
Married	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
Divorced	0.99 [0.99,1.00]	0.98 [0.97,0.98]	1.05 [1.02,1.07]	1.04 [1.02,1.07]
Widowed	0.83 [0.82,0.85]	0.82 [0.81,0.84]	0.70 [0.68,0.73]	0.70 [0.68,0.73]
Housing / neighborhood				
Crowded housing	1.03 [1.02,1.03]	1.03 [1.02,1.03]	1.18 [1.09,1.27]	1.18 [1.09,1.27]
Disadvantaged neighborhood	1.06 [1.05,1.07]	1.06 [1.05,1.06]	1.01 [0.97,1.06]	1.01 [0.97,1.06]
Occupational characteristics				
No work	0.81 [0.80,0.82]	0.80 [0.79,0.80]		
Low contact / no work from home	0.90 [0.89,0.90]	0.90 [0.89,0.91]		
Low contact / work from home	1.00 [1.00,1.00]	1.00 [1.00,1.00]		
Medium contact	1.03 [1.02,1.03]	1.02 [1.02,1.03]		
High contact	1.02 [1.02,1.03]	1.02 [1.01,1.02]		
Medical conditions				
Cardiovascular		1.05 [1.04,1.06]		1.08 [1.05,1.10]
Cancer		0.91 [0.90,0.92]		1.02 [0.99,1.05]
Psychiatric		1.21 [1.21,1.22]		1.10 [1.06,1.15]
Medical risk group		1.09 [1.09,1.10]		0.95 [0.93,0.97]

CI: Confidence Interval; HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's covid-19 program, data from SmiNet, Statistiska centralbyrån, Socialstyrelsen

Cox-regression: Positive COVID-19 cases, registered in SmiNet, March 2020-February 2021 (Figures 9 and 10)

	Ages 21-69		Ages 70+		
	Model 1 Relative risk [95%-CI]	**Model 2 Relative risk [95%-CI]**	**Model 1 Relative risk [95%-CI]**	**Model 2 Relative risk [95%-CI]**	**Model 3 Relative risk [95%-CI]**
Gender					
Men	0.91 [0.91,0.92]	0.91 [0.91,0.92]	1.09 [1.07,1.11]	1.06 [1.04,1.08]	1.12 [1.10,1.14]
Women (Ref.)	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
Education					
Primary	0.91 [0.90,0.92]	0.90 [0.89,0.91]	1.05 [1.03,1.07]	1.05 [1.03,1.07]	1.02 [1.00,1.04]
Secondary (Ref.)	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
Post-secondary	0.99 [0.98,0.99]	0.99 [0.98,1.00]	0.91 [0.89,0.93]	0.93 [0.91,0.95]	0.96 [0.94,0.98]
Income quartile					
Lowest	0.72 [0.72,0.73]	0.72 [0.72,0.73]	0.97 [0.94,0.99]	0.97 [0.95,1.00]	0.99 [0.96,1.01]
2nd	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
3rd	1.10 [1.10,1.11]	1.11 [1.10,1.11]	1.04 [1.02,1.07]	1.07 [1.04,1.09]	1.12 [1.09,1.15]
Highest	1.17 [1.16,1.18]	1.17 [1.16,1.18]	1.18 [1.15,1.21]	1.19 [1.17,1.22]	1.22 [1.19,1.25]
Country of birth					
Sweden	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
HIC	0.95 [0.94,0.97]	0.96 [0.95,0.97]	1.15 [1.12,1.19]	1.14 [1.11,1.17]	1.16 [1.13,1.19]
LMIC-MENA	1.67 [1.65,1.69]	1.68 [1.66,1.70]	3.46 [3.28,3.66]	3.57 [3.37,3.77]	3.61 [3.42,3.82]
LMIC-other	1.31 [1.29,1.32]	1.31 [1.30,1.32]	1.98 [1.90,2.06]	2.02 [1.94,2.11]	2.13 [2.05,2.22]
Marital Status					
Never married	0.85 [0.84,0.86]	0.85 [0.84,0.85]	1.12 [1.09,1.16]	1.05 [1.02,1.08]	0.82 [0.80,0.85]
Married	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
Divorced	0.88 [0.87,0.89]	0.88 [0.88,0.89]	1.18 [1.16,1.21]	1.10 [1.08,1.13]	0.91 [0.89,0.94]
Widowed	0.85 [0.82,0.88]	0.85 [0.82,0.88]	1.08 [1.06,1.10]	1.04 [1.01,1.06]	0.82 [0.81,0.84]

Housing / neighborhood					
Crowded housing	1.05 [1.04,1.05]	1.05 [1.04,1.06]	1.62 [1.55,1.70]	1.53 [1.46,1.61]	1.17 [1.12,1.22]
Disadvantaged neighborhood	1.07 [1.06,1.08]	1.07 [1.06,1.08]	1.32 [1.28,1.36]	1.28 [1.25,1.32]	1.21 [1.18,1.25]
Occupational characteristics					
No work	1.05 [1.04,1.06]	1.04 [1.03,1.05]			
Low contact / no work from home	1.11 [1.10,1.13]	1.11 [1.10,1.13]			
Low contact / work from home	1.00 [1.00,1.00]	1.00 [1.00,1.00]			
Medium contact	1.20 [1.19,1.21]	1.20 [1.19,1.21]			
High contact	1.81 [1.79,1.83]	1.81 [1.79,1.83]			
Medical conditions					
Cardiovascular		1.10 [1.08,1.11]		1.30 [1.27,1.32]	1.16 [1.14,1.18]
Cancer		0.98 [0.97,1.00]		1.00 [0.98,1.02]	1.06 [1.04,1.08]
Psychiatric		0.92 [0.91,0.93]		2.36 [2.31,2.41]	1.21 [1.18,1.24]
Medical risk group		1.07 [1.06,1.08]		1.33 [1.29,1.37]	1.20 [1.16,1.23]
Functional limitation		1.78 [1.71,1.85]		2.56 [2.31,2.84]	2.84 [2.56,3.14]
Care status					
No care					1.00 [1.00,1.00]
Home care					2.91 [2.84,2.98]
Institutional care					8.46 [8.24,8.68]

CI: Confidence Interval; HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's COVID-19 program, data from SmiNet, Statistics Sweden, National Board of Health and Welfare

Cox-regression: Relative risks of admission to hospital with COVID-19 diagnosis, March 2020-February 2021 (Figures 11 and 12)

	Ages 21-69		Ages 70+		
	Model 1 Relative risk [95%-CI]	**Model 2 Relative risk [95%-CI]**	**Model 1 Relative risk [95%-CI]**	**Model 2 Relative risk [95%-CI]**	**Model 3 Relative risk [95%-CI]**
Gender					
Men	1.71 [1.66,1.77]	1.65 [1.60,1.70]	1.62 [1.57,1.67]	1.54 [1.49,1.59]	1.62 [1.57,1.68]
Women (Ref.)	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
Education					
Primary	1.17 [1.12,1.21]	1.12 [1.08,1.16]	1.05 [1.02,1.09]	1.05 [1.02,1.09]	1.04 [1.01,1.08]
Secondary (Ref.)	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
Post-secondary	0.85 [0.82,0.88]	0.88 [0.85,0.91]	0.84 [0.81,0.88]	0.86 [0.83,0.90]	0.87 [0.83,0.90]
Income quartile					
Lowest	0.99 [0.95,1.04]	0.95 [0.91,0.99]	1.02 [0.98,1.06]	1.03 [0.99,1.08]	1.03 [0.99,1.07]
2nd	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
3rd	0.97 [0.93,1.02]	1.01 [0.97,1.06]	0.99 [0.95,1.03]	1.01 [0.97,1.05]	1.06 [1.01,1.10]
Highest	0.97 [0.93,1.02]	1.03 [0.98,1.08]	1.00 [0.95,1.04]	1.01 [0.97,1.06]	1.07 [1.03,1.12]
Country of birth					
Sweden	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
HIC	1.52 [1.44,1.60]	1.61 [1.53,1.70]	1.39 [1.33,1.45]	1.38 [1.32,1.44]	1.40 [1.34,1.46]
LMIC-MENA	4.03 [3.83,4.23]	4.31 [4.10,4.52]	4.86 [4.48,5.28]	4.94 [4.55,5.37]	4.45 [4.10,4.84]
LMIC-other	3.10 [2.98,3.23]	3.33 [3.20,3.47]	2.70 [2.54,2.88]	2.80 [2.63,2.98]	2.85 [2.68,3.03]
Marital Status					
Never married	0.89 [0.86,0.93]	0.85 [0.82,0.88]	1.25 [1.19,1.32]	1.20 [1.14,1.27]	0.96 [0.92,1.02]
Married	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
Divorced	1.01 [0.97,1.05]	0.97 [0.93,1.00]	1.30 [1.25,1.35]	1.24 [1.19,1.29]	1.04 [1.00,1.08]
Widowed	0.95 [0.85,1.05]	0.92 [0.83,1.02]	1.15 [1.10,1.19]	1.11 [1.06,1.15]	0.90 [0.86,0.93]
Housing / neighborhood					
Crowded housing	1.11 [1.06,1.16]	1.18 [1.13,1.23]	1.26 [1.16,1.37]	1.26 [1.16,1.37]	1.25 [1.15,1.36]
Disadvantaged neighborhood	1.31 [1.26,1.36]	1.28 [1.23,1.33]	1.49 [1.42,1.55]	1.45 [1.39,1.51]	1.38 [1.33,1.45]

Occupational characteristics				
No work	1.43 [1.34,1.53]	1.28 [1.20,1.36]		
Low contact / no work from home	1.06 [0.98,1.15]	1.07 [0.98,1.16]		
Low contact / work from home	1.00 [1.00,1.00]	1.00 [1.00,1.00]		
Medium contact	1.09 [1.03,1.15]	1.08 [1.02,1.15]		
High contact	1.64 [1.54,1.74]	1.58 [1.49,1.69]		
Medical conditions				
Cardiovascular		1.45 [1.39,1.50]	1.74 [1.69,1.80]	1.49 [1.45,1.54]
Cancer		1.06 [1.00,1.13]	1.12 [1.09,1.16]	1.13 [1.09,1.17]
Psychiatric		1.42 [1.36,1.47]	1.88 [1.82,1.95]	1.29 [1.24,1.34]
Medical risk group		2.14 [2.07,2.22]	1.63 [1.55,1.73]	1.50 [1.42,1.58]
Functional limitation		3.66 [3.33,4.02]	3.17 [2.70,3.72]	3.31 [2.82,3.88]
Care status				
No care				1.00 [1.00,1.00]
Home care				3.87 [3.74,4.02]
Institutional care				3.37 [3.20,3.55]

CI: Confidence Interval; HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's COVID-19 program, date from Statistics Sweden, National Board of Health and Welfare

Cox-regression: Relative risks of admission to ICU with Covid-19 diagnosis, March 2020-February 2021 (Figures 13 and 14)

	Ages 21-69		Ages 70+		
	Model 1 Relative risk [95%-CI]	**Model 2 Relative risk [95%-CI]**	**Model 1 Relative risk [95%-CI]**	**Model 2 Relative risk [95%-CI]**	**Model 3 Relative risk [95%-CI]**
Gender					
Men	2.68 [2.47,2.90]	2.56 [2.36,2.77]	2.78 [2.48,3.11]	2.69 [2.40,3.01]	2.73 [2.44,3.06]
Women (Ref.)	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
Education					
Primary	1.19 [1.08,1.30]	1.14 [1.04,1.25]	1.12 [1.00,1.25]	1.11 [0.99,1.25]	1.11 [0.99,1.24]
Secondary (Ref.)	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
Post-secondary	0.78 [0.72,0.85]	0.82 [0.75,0.89]	0.81 [0.71,0.93]	0.83 [0.73,0.95]	0.83 [0.72,0.94]
Income quartile					
Lowest	1.12 [1.01,1.24]	1.08 [0.97,1.19]	1.13 [0.99,1.30]	1.15 [1.00,1.31]	1.14 [0.99,1.31]
2nd	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
3rd	0.98 [0.88,1.09]	1.02 [0.92,1.13]	0.90 [0.78,1.03]	0.90 [0.78,1.04]	0.92 [0.80,1.06]
Highest	0.91 [0.81,1.02]	0.96 [0.85,1.08]	0.91 [0.79,1.06]	0.93 [0.80,1.08]	0.95 [0.82,1.11]
Country of birth					
Sweden	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
HIC	1.45 [1.27,1.64]	1.53 [1.35,1.74]	1.63 [1.40,1.90]	1.63 [1.40,1.90]	1.64 [1.41,1.91]
LMIC-MENA	3.57 [3.17,4.03]	3.75 [3.32,4.23]	5.99 [4.79,7.48]	5.86 [4.69,7.34]	5.55 [4.43,6.96]
LMIC-other	2.80 [2.53,3.10]	2.99 [2.70,3.30]	3.56 [2.98,4.25]	3.58 [3.00,4.28]	3.57 [2.99,4.27]
Marital Status					
Never married	0.95 [0.86,1.03]	0.91 [0.84,1.00]	0.93 [0.78,1.09]	0.95 [0.80,1.12]	0.90 [0.76,1.06]
Married	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]	1.00 [1.00,1.00]
Divorced	0.90 [0.81,0.98]	0.87 [0.79,0.95]	1.06 [0.93,1.20]	1.06 [0.93,1.20]	1.01 [0.89,1.15]
Widowed	1.01 [0.79,1.29]	0.98 [0.77,1.25]	0.99 [0.85,1.16]	0.98 [0.84,1.15]	0.92 [0.79,1.08]
Housing / neighborhood					
Crowded housing	1.12 [1.01,1.24]	1.18 [1.07,1.32]	1.12 [0.86,1.47]	1.17 [0.90,1.53]	1.22 [0.93,1.60]
Disadvantaged neighborhood	1.45 [1.32,1.59]	1.42 [1.29,1.55]	1.52 [1.32,1.76]	1.51 [1.31,1.74]	1.48 [1.28,1.71]

Occupational characteristics				
No work	1.48 [1.26,1.74]	1.34 [1.14,1.58]		
Low contact / no work from home	1.19 [0.98,1.45]	1.20 [0.98,1.46]		
Low contact / work from home	1.00 [1.00,1.00]	1.00 [1.00,1.00]		
Medium contact	1.20 [1.03,1.39]	1.19 [1.03,1.38]		
High contact	1.70 [1.44,2.00]	1.64 [1.40,1.94]		
Medical conditions				
Cardiovascular		1.33 [1.22,1.45]	1.40 [1.26,1.55]	1.33 [1.19,1.48]
Cancer		0.91 [0.79,1.06]	0.90 [0.79,1.03]	0.90 [0.78,1.02]
Psychiatric		1.32 [1.19,1.46]	0.91 [0.76,1.08]	0.84 [0.70,1.01]
Medical risk group		2.56 [2.35,2.78]	1.44 [1.24,1.66]	1.42 [1.23,1.64]
Functional limitation		2.71 [2.15,3.43]	0.82 [0.34,1.98]	0.80 [0.33,1.93]
Care status				
No care				1.00 [1.00,1.00]
Home care				1.93 [1.68,2.23]
Institutional care				0.66 [0.44,0.97]

CI: Confidence Interval; HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's COVID-19 program, date from Statistics Sweden, National Board of Health and Welfare

Part 2: Univariate incidence rates for age groups 21-49, 50-69, 70-84, and 85+ years

Deaths and incidence rates of death in COVID-19

Age group 21-49

	March 2020 – February 2021		**March 2020 – August 2020**		**September 2020 – February 2021**	
	Number of cases	***Rate per 1000 person-years***	***Number of cases***	***Rate per 1000 person-years***	***Number of cases***	***Rate per 1000 person-years***
Total						
	118	0.03	71	0.04	47	0.03
Gender						
Man	72	0.04	45	0.05	27	0.03
Woman	46	0.03	26	0.03	20	0.02
Education						
Primary	23	0.06	<15	0.06	<15	0.06
Secondary	44	0.03	29	0.04	15	0.02
Post-secondary	28	0.02	16	0.02	<15	0.01
Income quartile						
Lowest	72	0.08	43	0.09	29	0.06
2nd	24	0.03	15	0.03	<15	0.02
3rd	<15	0.01	<15	0.01	<15	0.01
Highest	<15	0.01	<15	0.01	<15	0.01
Country of birth						
Sweden	79	0.03	46	0.03	33	0.02
HIC	<15	0.02	<15	0.04	<15	0.01
LMIC MENA	<15	0.04	<15	0.05	<15	0.03
LMIC other	23	0.05	<15	0.06	<15	0.04
Africa	<15	0.07	<15	0.08	<15	0.06
Asia	<15	0.03	<15	0.04	<15	0.02
EU28 without Nordics	<15	0.02	<15	0.02	<15	0.01
Europe without EU28 and Nordics	<15	0.08	<15	0.12	<15	0.05
Nordics without Sweden	0	0.00	<15	0.00	<15	0.00
North America	0	0.00	<15	0.00	<15	0.00
South America	<15	0.08	<15	0.10	<15	0.05
Marital Status						
Married	70	0.03	44	0.04	26	0.02
Never married	35	0.03	21	0.03	<15	0.02
Divorced	<15	0.05	<15	0.05	<15	0.05
Widowed	<15	0.14	<15	0.00	<15	0.28
Housing / neighborhood						
Crowded housing	18	0.03	<15	0.04	<15	0.02
Not crowded housing	100	0.03	60	0.04	40	0.03
Disadvantaged neighborhood	37	0.08	28	0.12	<15	0.04
Not disadvantaged neighborhood	81	0.02	43	0.03	38	0.02

Occupational characteristics						
No work	64	0.08	38	0.10	26	0.07
Low contact / no work from home	<15	0.02	<15	0.02	<15	0.01
Low contact / work from home	<15	0.01	<15	0.02	<15	0.01
Medium contact	32	0.02	19	0.02	<15	0.02
High contact	12	0.02	<15	0.02	<15	0.01
Medical conditions						
No medical risk group	58	0.02	40	0.02	18	0.01
Medical risk group	60	0.15	31	0.15	29	0.14
Cardiovascular	20	0.16	<15	0.14	<15	0.17
Cancer	16	0.49	<15	0.37	<15	0.63
Psychiatric	36	0.08	21	0.10	15	0.07
Functional limitation	27	1.13	16	1.33	<15	0.93
County						
Blekinge	<15	0.02	<15	0.00	<15	0.04
Dalarna	<15	0.00	<15	0.00	<15	0.00
Gotland	<15	0.00	<15	0.00	<15	0.00
Gävleborg	<15	0.02	<15	0.02	<15	0.02
Halland	<15	0.00	<15	0.00	<15	0.00
Jämtland	<15	0.00	<15	0.00	<15	0.00
Jönköping	<15	0.02	<15	0.02	<15	0.02
Kalmar	<15	0.00	<15	0.00	<15	0.00
Kronoberg	<15	0.01	<15	0.03	<15	0.00
Norrbotten	<15	0.06	<15	0.07	<15	0.05
Skåne	<15	0.03	<15	0.02	<15	0.03
Stockholm	44	0.05	28	0.06	16	0.03
Södermanland	<15	0.07	<15	0.14	<15	0.00
Uppsala	<15	0.01	<15	0.03	<15	0.00
Värmland	<15	0.01	<15	0.00	<15	0.02
Västerbotten	<15	0.00	<15	0.00	<15	0.00
Västernorrland	<15	0.08	<15	0.05	<15	0.10
Västmanlands	<15	0.03	<15	0.04	<15	0.02
Västra Götaland	26	0.04	15	0.05	<15	0.03
Örebro	<15	0.02	<15	0.04	<15	0.00
Östergötland	<15	0.02	<15	0.02	<15	0.01

HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Age group 50-69

	March 2020 – February 2021		**March 2020 – August 2020**		**September 2020 – February 2021**	
	Number of cases	***Rate per 1000 person-years***	***Number of cases***	***Rate per 1000 person-years***	***Number of cases***	***Rate per 1000 person-years***
Total						
	1080	0.45	585	0.48	495	0.42
Gender						
Man	774	0.65	430	0.71	344	0.58
Woman	306	0.26	155	0.26	151	0.26
Education						
Primary	305	0.89	163	0.94	142	0.84
Secondary	500	0.44	267	0.46	233	0.41
Post-secondary	238	0.27	133	0.30	105	0.24
Income quartile						
Lowest	550	0.93	301	1.01	249	0.86
2nd	226	0.38	119	0.39	107	0.36
3rd	163	0.27	81	0.27	82	0.28
Highest	141	0.23	84	0.28	57	0.19
Country of birth						
Sweden	685	0.36	338	0.35	347	0.36
HIC	101	0.54	55	0.58	46	0.50
LMIC MENA	135	1.50	100	2.20	35	0.79
LMIC other	159	0.86	92	0.98	67	0.74
Africa	70	1.91	54	2.90	16	0.89
Asia	150	1.01	104	1.38	46	0.62
EU28 without Nordics	33	0.41	16	0.40	17	0.43
Europe without EU28 and Nordics	70	0.87	33	0.81	37	0.93
North America	<15	0.61	<15	0.80	<15	0.41
Nordics without Sweden	54	0.64	28	0.65	26	0.62
South America	12	0.57	<15	0.75	<15	0.38
Marital Status						
Married	333	0.55	174	0.57	159	0.54
Never married	467	0.37	266	0.41	201	0.32
Divorced	246	0.53	125	0.53	121	0.53
Widowed	34	0.61	20	0.70	<15	0.51
Housing / neighborhood						
Crowded housing	117	0.93	78	1.22	39	0.63
Not crowded housing	963	0.43	507	0.44	456	0.41
Disadvantaged neighborhood	258	1.24	152	1.45	106	1.04
Not disadvantaged neighborhood	822	0.38	433	0.39	389	0.36

Occupational characteristics						
No work	583	1.09	319	1.17	264	1.00
Low contact / no work from home	43	0.31	22	0.31	21	0.30
Low contact / work from home	60	0.20	38	0.25	22	0.15
Medium contact	294	0.30	153	0.31	141	0.29
High contact	99	0.24	52	0.25	47	0.23
Medical conditions						
No medical risk group	212	0.15	124	0.18	88	0.13
Medical risk group	868	0.86	461	0.90	407	0.81
Cardiovascular	515	1.35	270	1.40	245	1.30
Cancer	172	1.33	81	1.23	91	1.44
Psychiatric	303	1.42	162	1.50	141	1.34
Functional limitation	82	6.10	46	6.70	36	5.47
County						
Blekinge	<15	0.23	<15	0.10	<15	0.37
Dalarna	21	0.29	<15	0.38	<15	0.20
Gotland	<15	0.32	<15	0.12	<15	0.51
Gävleborg	31	0.43	17	0.46	<15	0.39
Halland	29	0.36	<15	0.29	17	0.43
Jämtland	<15	0.22	<15	0.18	<15	0.25
Jönköping	36	0.43	16	0.37	20	0.48
Kalmar	15	0.24	<15	0.22	<15	0.26
Kronoberg	16	0.35	<15	0.22	<15	0.49
Norrbotten	20	0.31	<15	0.15	15	0.47
Skåne	104	0.33	19	0.12	85	0.55
Stockholm	389	0.75	276	1.05	113	0.44
Södermanland	54	0.76	39	1.08	15	0.43
Uppsala	26	0.31	16	0.38	<15	0.24
Värmland	19	0.27	<15	0.22	<15	0.31
Västerbotten	<15	0.17	<15	0.13	<15	0.23
Västernorrland	28	0.45	<15	0.35	17	0.56
Västmanlands	21	0.32	<15	0.33	<15	0.31
Västra Götaland	175	0.44	83	0.41	92	0.47
Örebro	15	0.21	<15	0.28	<15	0.14
Östergötland	49	0.46	26	0.48	23	0.44

HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Age group 70-84

	March 2020 – February 2021		**March 2020 – August 2020**		**September 2020 – February 2021**	
	Number of cases	***Rate per 1000 person-years***	***Number of cases***	***Rate per 1000 person-years***	***Number of cases***	***Rate per 1000 person-years***
Total						
	5424	4.20	2486	3.78	2938	4.63
Gender						
Man	3306	5.37	1525	4.86	1781	5.90
Woman	2118	3.13	961	2.79	1157	3.48
Education						
Primary	2146	5.66	946	4.89	1200	6.47
Secondary	2141	3.98	971	3.55	1170	4.43
Post-secondary	961	2.67	468	2.56	493	2.79
Income quartile						
Lowest	1466	4.56	656	4.00	810	5.14
2nd	1553	4.82	702	4.28	851	5.39
3rd	1281	3.96	583	3.54	698	4.39
Highest	1124	3.46	545	3.30	579	3.63
Country of birth						
Sweden	4252	3.77	1896	3.30	2356	4.26
HIC	670	5.85	322	5.51	348	6.21
LMIC MENA	196	14.31	130	18.61	66	9.84
LMIC other	306	8.43	138	7.46	168	9.44
Africa	63	12.10	47	17.72	16	6.26
Asia	239	11.14	136	12.45	103	9.79
EU28 without Nordics	205	5.00	96	4.59	109	5.42
Europe without EU28/Nordics	196	8.97	80	7.18	116	10.85
North America	<15	2.45	<15	2.88	<15	1.99
Nordics without Sweden	426	6.32	207	6.01	219	6.64
South America	38	7.02	21	7.62	17	6.40
Marital Status						
Married	706	5.20	312	4.50	394	5.92
Never married	2355	3.28	1066	2.92	1289	3.66
Divorced	1215	4.98	559	4.50	656	5.49
Widowed	1148	5.88	549	5.51	599	6.26
Housing / neighborhood						
Crowded housing	209	10.44	93	9.07	116	11.88
Not crowded housing	5215	4.10	2393	3.70	2822	4.52
Disadvantaged neighborhood	821	8.82	433	9.11	388	8.52
Not disadvantaged neighborhood	4603	3.84	2053	3.36	2550	4.33
Care status						
No care	1786	1.55	783	1.33	1003	1.78
Home care	1645	15.37	721	13.44	924	17.30
Institutional care	1993	61.68	982	59.23	1011	64.26

Medical conditions						
No medical risk group	334	1.07	160	1.01	174	1.13
Medical risk group	5090	5.19	2326	4.66	2764	5.76
Cardiovascular	3690	7.28	1694	6.53	1996	8.06
Cancer	1151	5.57	503	4.75	648	6.44
Psychiatric	1951	18.67	986	18.24	965	19.13
Functional limitation	64	16.31	31	15.25	33	17.43
County						
Blekinge	68	2.84	<15	0.82	58	4.93
Dalarna	136	3.05	92	4.06	44	2.01
Gotland	22	2.27	<15	0.41	20	4.21
Gävleborg	250	5.70	86	3.85	164	7.63
Halland	82	1.79	25	1.07	57	2.53
Jämtland	54	2.81	29	2.96	25	2.65
Jönköping	198	4.24	76	3.20	122	5.32
Kalmar	89	2.32	35	1.79	54	2.86
Kronoberg	110	4.21	34	2.55	76	5.92
Norrbotten	94	2.49	41	2.13	53	2.86
Skåne	649	3.86	117	1.37	532	6.44
Stockholm	1643	6.93	1014	8.40	629	5.40
Södermanland	191	4.46	128	5.87	63	3.00
Uppsala	207	4.60	90	3.93	117	5.30
Värmland	63	1.51	27	1.27	36	1.75
Västerbotten	57	1.59	<15	0.71	44	2.50
Västernorrland	151	4.04	54	2.83	97	5.29
Västmanlands	128	3.37	72	3.72	56	3.00
Västra Götaland	890	4.28	376	3.55	514	5.03
Örebro	124	3.00	62	2.95	62	3.06
Östergötland	218	3.65	103	3.39	115	3.92

HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Age group 85+

	March 2020 – February 2021		**March 2020 – August 2020**		**September 2020 – February 2021**	
	Number of cases	***Rate per 1000 person-years***	***Number of cases***	***Rate per 1000 person-years***	***Number of cases***	***Rate per 1000 person-years***
Total						
	7250	26.51	3346	23.34	3904	30.01
Gender						
Man	3248	32.68	1477	28.22	1771	37.64
Woman	4002	22.99	1869	20.53	2133	25.69
Education						
Primary	3539	27.27	1531	22.42	2008	32.65
Secondary	2401	26.59	1160	24.54	1241	28.84
Post-secondary	1108	23.13	545	21.85	563	24.52
Income quartile						
Lowest	1466	21.31	636	17.67	830	25.31
2nd	1771	26.02	832	23.29	939	29.05
3rd	1884	27.57	847	23.64	1037	31.89
Highest	2129	31.18	1031	28.78	1098	33.82
Country of birth						
Sweden	6183	25.63	2814	22.24	3369	29.36
HIC	773	30.59	365	27.59	408	33.90
LMIC MENA	91	54.88	56	64.68	35	44.17
LMIC other	203	38.40	111	40.06	92	36.58
Africa	<15	23.61	<15	38.05	<15	8.15
Asia	138	48.92	82	55.73	56	41.49
EU28 without Nordics	309	31.11	146	28.08	163	34.44
Europe without EU28 and Nordics	136	38.93	73	39.70	63	38.08
North America	17	22.15	<15	17.47	<15	27.28
Nordics without Sweden	432	30.71	201	27.26	231	34.50
South America	23	36.98	<15	40.23	<15	33.46
Marital Status						
Married	409	28.39	201	26.47	208	30.54
Never married	1862	22.30	805	18.50	1057	26.43
Divorced	992	29.97	487	28.09	505	32.03
Widowed	3987	27.99	1853	24.73	2134	31.60
Housing / neighborhood						
Crowded housing	304	62.82	152	57.94	152	68.60
Not crowded housing	6946	25.86	3194	22.69	3752	29.34
Disadvantaged neighborhood	812	37.98	381	33.82	431	42.61
Not disadvantaged neighborhood	6438	25.54	2965	22.44	3473	28.95
Care status						
No care	645	4.22	285	5.88	360	5.01
Home care	2472	21.78	1086	30.00	1386	25.73
Institutional care	4133	75.80	1975	95.36	2158	84.89

Medical conditions						
Not medical risk group	409	14.13	185	12.37	224	16.02
Medical risk group	6841	27.98	3161	24.61	3680	31.70
Cardiovascular	5315	33.09	2484	29.26	2831	37.39
Cancer	1561	28.60	701	24.32	860	33.39
Psychiatric	2456	69.22	1289	66.78	1167	72.13
County						
Blekinge	55	10.33	<15	2.87	47	18.57
Dalarna	210	22.79	127	26.28	83	18.93
Gotland	17	8.80	<15	1.98	15	16.24
Gävleborg	261	29.39	89	19.12	172	40.70
Halland	172	17.27	59	11.32	113	23.81
Jämtland	68	17.11	40	19.18	28	14.82
Jönköping	300	27.38	110	19.13	190	36.48
Kalmar	137	16.26	37	8.38	100	24.93
Kronoberg	183	29.17	67	20.32	116	38.98
Norrbotten	114	14.47	49	11.86	65	17.35
Skåne	837	23.09	154	8.10	683	39.64
Stockholm	2101	44.72	1277	51.84	824	36.87
Södermanland	188	22.19	120	27.09	68	16.82
Uppsala	264	29.49	147	31.38	117	27.42
Värmland	110	11.36	50	9.85	60	13.02
Västerbotten	81	10.62	<15	3.50	67	18.46
Västernorrland	216	27.93	74	18.17	142	38.78
Västmanlands	200	24.63	118	27.72	82	21.22
Västra Götaland	1218	26.76	537	22.50	681	31.45
Örebro	154	18.59	96	22.09	58	14.72
Östergötland	364	27.94	171	25.05	193	31.12

HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Cases and Incidence rates of first self-ordered 1177 PCR tests

Age group 21-49

	March 2020 – February 2021		March 2020 – August 2020		September 2020 – February 2021	
	Number of cases	*Rate per 1000 person-years*	*Number of cases*	*Rate per 1000 person-years*	*Number of cases*	*Rate per 1000 person-years*
Total						
	795364	256.14	96062	57.69	699302	485.58
Gender						
Man	359380	224.09	38937	45.72	320443	426.07
Woman	435984	290.38	57125	70.23	378859	550.64
Education						
Primary	54850	167.24	5253	30.74	49597	315.73
Secondary	333108	253.38	32608	46.60	300500	488.73
Post-secondary	398514	291.96	57121	76.72	341393	550.23
Income quartile						
Lowest	126845	158.87	14832	35.42	112013	294.99
2nd	206861	266.63	24009	57.61	182852	509.16
3rd	224724	291.08	26215	62.83	198509	559.46
Highest	236934	312.23	31006	75.19	205928	594.38
Country of birth						
Sweden	650967	287.47	76816	62.82	574151	551.20
HIC	45247	209.23	6610	56.93	38637	385.84
LMIC MENA	36275	158.46	4134	34.58	32141	293.85
LMIC other	62875	158.98	8502	41.17	54373	287.74
Africa	11247	94.84	1592	26.16	9655	167.24
Asia	61974	163.07	7401	37.31	54573	300.41
EU28 without Nordics	26199	183.28	3871	50.81	22328	334.49
Europe without EU28 and Nordics	23004	199.66	3093	50.60	19911	368.13
North America	3867	228.37	614	67.19	3253	417.35
Nordics without Sweden	9929	283.34	1454	75.36	8475	538.11
South America	8177	256.57	1221	71.14	6956	472.95
Marital Status						
Married	467465	249.80	56387	56.55	411078	470.24
Never married	278184	270.75	33683	60.47	244501	519.70
Divorced	48578	243.01	5878	54.69	42700	461.98
Widowed	1137	176.45	114	33.48	1023	336.62
Housing / neighborhood						
Crowded housing	113646	217.01	15047	54.12	98599	401.38
Not crowded housing	681718	264.08	81015	58.41	600703	502.90
Disadvantaged neighborhood	80978	203.45	9458	44.95	71520	381.26
Not disadvantaged neighborhood	714386	263.89	86604	59.54	627782	501.21

Occupational characteristics						
No work	109864	167.64	13191	38.61	96673	308.14
Low contact / no work from home	33064	227.43	3618	46.63	29446	434.33
Low contact / work from home	121946	321.21	18198	87.22	103748	606.74
Medium contact	374514	279.81	41174	57.01	333340	540.93
High contact	153147	265.93	19575	63.28	133572	501.13
Medical conditions						
Not medical risk group	699450	252.53	83817	56.50	615633	478.59
Medical risk group	95914	285.96	12245	67.42	83669	544.04
Cardiovascular	30312	292.21	4143	73.56	26169	551.91
Cancer	7474	278.58	951	65.38	6523	531.04
Psychiatric	96434	275.64	13625	72.57	82809	510.85
County						
Blekinge	19132	500.28	1331	61.52	17801	1071.90
Dalarna	24586	370.11	56	1.59	24530	784.08
Gotland	6584	466.59	971	120.48	5613	927.51
Gävleborg	761	8.33	56	1.22	705	15.53
Halland	921	8.42	46	0.84	875	16.09
Jämtland	20687	696.04	2815	156.81	17872	1518.61
Jönköping	747	6.01	54	0.86	693	11.21
Kalmar	27875	507.93	2725	87.11	25150	1065.84
Kronoberg	891	12.94	67	1.93	824	24.11
Norrbotten	18041	273.03	44	1.26	17997	575.63
Skåne	192576	500.13	18215	82.98	174361	1053.20
Stockholm	277330	404.78	50913	133.47	226417	745.61
Södermanland	40384	590.35	3185	81.04	37199	1277.97
Uppsala	2429	16.86	263	3.62	2166	30.34
Värmland	37249	563.85	3368	88.00	33881	1219.14
Västerbotten	1201	12.32	97	1.98	1104	22.81
Västernorrland	27770	485.30	3383	104.00	24387	987.65
Västmanlands	42213	620.56	3974	99.15	38239	1368.50
Västra Götaland	4196	6.68	329	1.04	3867	12.40
Örebro	47806	629.44	4010	89.09	43796	1415.50
Östergötland	1985	11.94	160	1.91	1825	22.12

HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's COVID-19 programme, data from Inera/1177, Statistics Sweden, National Board of Health and Welfare

Age group 50-69

	March 2020 – February 2021		**March 2020 – August 2020**		**September 2020 – February 2021**	
	Number of cases	***Rate per 1000 person-years***	***Number of cases***	***Rate per 1000 person-years***	***Number of cases***	***Rate per 1000 person-years***
Total						
	329802	131.44	35295	31.84	294507	294.12
Gender						
Man	150133	140.94	14404	25.84	135729	267.24
Woman	179669	169.66	20891	37.91	158778	321.80
Education						
Primary	31237	47.91	2682	16.91	28555	193.26
Secondary	153539	225.08	14200	26.57	139339	287.16
Post-secondary	144084	161.65	18318	45.11	125766	349.72
Income quartile						
Lowest	54102	191.73	5795	21.19	48307	190.45
2nd	85045	159.62	8133	29.14	76912	305.04
3rd	92182	173.61	9212	33.04	82970	332.17
Highest	98473	186.93	12155	43.88	86318	351.27
Country of birth						
Sweden	276629	243.24	28305	31.75	248324	309.33
HIC	23243	26.10	3028	34.56	20215	254.53
LMIC MENA	10118	83.10	1212	28.63	8906	228.73
LMIC other	19812	157.33	2750	31.61	17062	212.81
Africa	3032	31.04	558	31.89	2474	151.51
Asia	16716	193.05	2036	28.98	14680	227.14
EU28 without Nordics	8722	85.34	1190	31.68	7532	219.62
Europe without EU28 and Nordics	9120	126.27	1150	30.32	7970	228.58
North America	1437	36.43	203	44.32	1234	302.51
Nordics without Sweden	10933	251.43	1327	33.68	9606	269.32
South America	3213	3.95	526	54.27	2687	310.14
Marital Status						
Married	72192	253.56	7758	28.10	64434	255.70
Never married	185817	220.30	19214	32.48	166603	313.31
Divorced	65846	88.19	7679	35.74	58167	300.56
Widowed	5947	27.08	644	24.71	5303	220.61
Housing / neighborhood						
Crowded housing	16927	16.81	2085	35.42	14842	278.89
Not crowded housing	312875	291.41	33210	31.64	279665	294.98
Disadvantaged neighborhood	24451	24.22	2618	27.00	21833	245.88
Not disadvantaged neighborhood	305351	286.79	32677	32.30	272674	298.82

Occupational characteristics						
No work	46620	138.86	5437	22.02	41183	179.41
Low contact / no work from home	17573	59.50	1584	24.08	15989	266.24
Low contact / work from home	50672	257.43	6395	46.75	44277	366.92
Medium contact	150591	259.49	14151	30.79	136440	331.17
High contact	63683	104.57	7654	38.85	56029	316.61
Medical conditions						
Not medical risk group	196903	271.70	20916	32.74	175987	306.04
Medical risk group	132899	127.22	14379	30.62	118520	278.04
Cardiovascular	48032	47.23	5362	30.625	42670	267.72
Cancer	16645	16.53	1905	31.584	14740	268.80
Psychiatric	27813	27.52	3966	41.76	23847	277.92
County						
Blekinge	9224	403.66	603	35.84	8621	606.43
Dalarna	12206	228.88	<15	0.23	12199	440.53
Gotland	3665	120.50	539	74.34	3126	518.79
Gävleborg	125	1.96	<15	0.22	117	3.32
Halland	140	0.88	<15	0.22	131	3.33
Jämtland	10498	281.12	1446	102.92	9052	840.74
Jönköping	107	1.14	<15	0.14	101	2.45
Kalmar	12794	259.71	1108	41.03	11686	504.49
Kronoberg	143	2.23	<15	0.31	136	6.11
Norrbotten	8783	146.78	<15	0.17	8778	325.44
Skåne	76559	491.28	6078	42.92	70481	591.57
Stockholm	104054	159.46	17786	78.60	86268	442.78
Södermanland	20192	283.00	1568	51.14	18624	740.27
Uppsala	289	1.22	32	0.77	257	6.32
Värmland	17179	76.05	1414	45.42	15765	606.37
Västerbotten	108	2.57	<15	0.16	103	3.37
Västernorrland	13344	213.46	1476	54.08	11868	509.51
Västmanlands	19595	364.38	1706	58.55	17889	769.29
Västra Götaland	563	2.36	23	0.12	540	2.77
Örebro	20028	352.30	1455	47.16	18573	753.81
Östergötland	206	2.63	<15	0.26	192	3.69

HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's COVID-19 programme, data from Inera/1177, Statistics Sweden, National Board of Health and Welfare

Age group 70-84

	March 2020 – February 2021		**March 2020 – August 2020**		**September 2020 – February 2021**	
	Number of cases	***Rate per 1000 person-years***	***Number of cases***	***Rate per 1000 person-years***	***Number of cases***	***Rate per 1000 person-years***
Total						
	37216	33.35	4848	8.53	32368	59.16
Gender						
Man	18561	34.17	2321	8.38	16240	60.99
Woman	18655	32.58	2527	8.66	16128	57.42
Education						
Primary	6123	19.13	593	3.65	5530	35.10
Secondary	14545	31.14	1781	7.49	12764	55.69
Post-secondary	16253	51.41	2442	15.08	13811	89.52
Income quartile						
Lowest	5420	19.83	629	4.53	4791	35.64
2nd	6716	24.89	788	5.74	5928	44.71
3rd	10183	35.72	1266	8.71	8917	63.81
Highest	14897	51.78	2165	14.70	12732	90.69
Country of birth						
Sweden	32921	33.73	4207	8.46	28714	60.00
HIC	2824	28.84	415	8.32	2409	50.19
LMIC MENA	536	49.80	84	15.24	452	86.05
LMIC other	935	29.98	142	8.94	793	51.83
Africa	183	41.12	39	17.14	144	66.21
Asia	755	43.52	111	12.52	644	75.90
EU28 without Nordics	1130	31.40	180	9.80	950	53.90
Europe without EU28 and Nordics	443	23.40	62	6.44	381	40.96
North America	85	48.28	16	17.72	69	80.44
Nordics without Sweden	1459	25.74	195	6.76	1264	45.44
South America	240	51.09	38	15.79	202	88.16
Marital Status						
Married	2511	22.84	360	6.44	2151	39.79
Never married	23591	36.01	2939	8.80	20652	64.33
Divorced	7301	36.55	1079	10.59	6222	63.58
Widowed	3813	25.25	470	6.12	3343	45.06
Housing / neighborhood						
Crowded housing	594	36.22	80	9.55	514	64.05
Not crowded housing	36622	33.31	4768	8.51	31854	59.08
Disadvantaged neighborhood	2117	28.21	260	6.81	1857	50.42
Not disadvantaged neighborhood	35099	33.72	4588	8.65	30511	59.79

Medical conditions						
Not medical risk group	10317	35.58	1336	9.03	8981	63.21
Medical risk group	26899	32.57	3512	8.35	23387	57.73
Cardiovascular	13566	33.63	1832	8.91	11734	59.31
Cancer	6143	34.79	856	9.51	5287	61.08
Psychiatric	1918	33.87	289	10.01	1629	58.67
County						
Blekinge	1096	53.08	123	11.64	973	96.54
Dalarna	1394	36.74	0	0.00	1394	74.70
Gotland	488	57.78	129	29.70	359	87.52
Gävleborg	15	0.39	0	0.00	15	0.78
Halland	<15	0.12	0	0.00	<15	0.25
Jämtland	1474	93.35	273	33.35	1201	157.96
Jönköping	<15	0.22	<15	0.05	<15	0.39
Kalmar	1527	46.69	200	11.96	1327	83.06
Kronoberg	<15	0.39	0	0.00	<15	0.78
Norrbotten	920	28.48	<15	0.18	917	57.73
Skåne	9006	62.63	801	10.86	8205	117.20
Stockholm	11194	56.25	2198	21.54	8996	92.75
Södermanland	2721	74.35	323	17.15	2398	135.02
Uppsala	27	0.68	<15	0.15	24	1.22
Värmland	1575	44.41	184	10.15	1391	80.26
Västerbotten	<15	0.22	0	0.00	<15	0.45
Västernorrland	1661	52.51	227	14.02	1434	92.86
Västmanlands	2087	65.71	237	14.52	1850	119.82
Västra Götaland	55	0.30	<15	0.02	53	0.58
Örebro	1927	53.93	142	7.75	1785	102.49
Östergötland	19	0.36	<15	0.08	17	0.66

HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's COVID-19 programme, data from Inera/1177, Statistics Sweden, National Board of Health and Welfare

Age group 85+

	March 2020 – February 2021		March 2020 – August 2020		September 2020 – February 2021	
	Number of cases	*Rate per 1000 person-years*	*Number of cases*	*Rate per 1000 person-years*	*Number of cases*	*Rate per 1000 person-years*
Total						
	524	4.22	55	0.88	469	7.65
Gender						
Man	259	4.61	30	1.05	229	8.25
Woman	265	3.90	25	0.73	240	7.15
Education						
Primary	108	1.93	<15	0.25	101	3.65
Secondary	181	4.36	17	0.81	164	7.99
Post-secondary	215	9.03	28	2.32	187	15.93
Income quartile						
Lowest	78	2.43	<15	0.25	74	4.68
2nd	80	2.82	<15	0.49	73	5.20
3rd	120	3.79	<15	0.50	112	7.16
Highest	246	7.68	36	2.22	210	13.28
Country of birth						
Sweden	439	4.05	48	0.88	391	7.30
HIC	51	4.28	<15	0.66	47	7.99
LMIC MENA	13	14.76	<15	2.23	12	27.76
LMIC other	21	7.04	<15	1.32	19	12.95
Africa	<15	9.15	<15	0.00	<15	18.68
Asia	22	14.76	<15	3.95	19	26.01
EU28 without Nordics	27	5.32	<15	0.78	25	9.98
Europe without EU28 and Nordics	<15	4.58	<15	0.00	<15	9.28
North America	<15	5.81	<15	0.00	<15	11.75
Nordics without Sweden	21	3.36	<15	0.63	19	6.16
South America	<15	2.98	<15	0.00	<15	6.04
Marital Status						
Married	<15	1.64	<15	0.36	<15	2.95
Never married	238	4.51	25	0.94	213	8.17
Divorced	84	5.83	<15	1.23	75	10.55
Widowed	193	3.75	20	0.77	173	6.80
Housing / neighborhood						
Crowded housing	15	10.77	0	0.00	15	21.89
Not crowded housing	509	4.15	55	0.89	454	7.49
Disadvantaged neighborhood	36	3.96	<15	0.43	34	7.58
Not disadvantaged neighborhood	488	4.24	53	0.91	435	7.65

Medical conditions						
Not medical risk group	65	3.67	<15	0.67	59	6.76
Medical risk group	459	4.31	49	0.91	410	7.79
Cardiovascular	274	4.52	22	0.72	252	8.42
Cancer	152	5.81	14	1.06	138	10.68
Psychiatric	26	5.41	v	1.23	23	9.69
County						
Blekinge	<15	4.64	<15	1.53	<15	7.83
Dalarna	16	4.04	0	0.00	16	8.17
Gotland	<15	6.12	<15	2.02	<15	10.34
Gävleborg	<15	0.24	0	0.00	<15	0.48
Halland	<15	0.00	0	0.00	0	0.00
Jämtland	23	13.98	v	5.99	18	22.22
Jönköping	0	0.00	0	0.00	0	0.00
Kalmar	<15	3.40	<15	1.12	<15	5.74
Kronoberg	0	0.00	0	0.00	0	0.00
Norrbotten	17	4.65	0	0.00	17	9.41
Skåne	147	8.45	<15	1.14	137	15.97
Stockholm	145	7.10	24	2.32	121	12.00
Södermanland	46	11.10	<15	0.48	45	22.03
Uppsala	0	0.00	0	0.00	0	0.00
Värmland	20	4.76	<15	0.47	19	9.15
Västerbotten	0	0.00	0	0.00	0	0.00
Västernorrland	32	8.93	<15	3.30	26	14.70
Västmanlands	27	8.33	<15	1.22	25	15.63
Västra Götaland	<15	0.05	0	0.00	<15	0.09
Örebro	19	4.47	<15	0.46	18	8.57
Östergötland	0	0.00	0	0.00	0	0.00

HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's COVID-19 programme, data from Inera/1177, Statistics Sweden, National Board of Health and Welfare

Incidence of positive COVID-19 cases registered in SmiNet

Age group 21-49

	March 2020 – February 2021		March 2020 – August 2020		September 2020 – February 2021	
	Number of cases	Incidens per 1000 personår	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years
Total	333780	90.94	37348	19.88	296432	165.46
Gender						
Women (Ref.)	178423	99.56	22374	24.33	156049	178.83
Men	155357	82.72	14974	15.61	140383	152.77
Education						
Primary	28939	77.47	3218	16.93	25721	140.16
Secondary (Ref.)	147179	95.17	15953	20.21	131226	173.37
Post-secondary	151349	92.77	17483	20.84	133866	168.96
Income quartile						
Lowest	59976	66.08	6392	13.79	53584	120.62
2nd	89318	97.66	10646	22.74	78672	176.21
3rd	93132	101.06	10516	22.27	82616	183.88
Highest	91354	98.60	9794	20.62	81560	180.62
Country of birth						
Sweden	243162	89.22	26065	18.70	217097	162.99
HIC	17925	71.66	5795	25.55	16120	133.02
LMIC MENA	42726	96.37	3683	28.45	36931	170.56
LMIC other	29967	119.26	5795	25.55	26284	215.75
Africa	9943	77.84	1723	26.46	8220	131.26
Asia	45564	107.47	5427	24.97	40137	194.23
EU28 without Nordics	10970	67.16	1007	11.97	9963	125.72
Europe without EU28 and Nordics	15751	121.10	2038	30.31	13713	218.23
Nordics without Sweden	3138	75.08	363	16.76	2775	137.77
North America	1460	73.19	173	16.83	1287	133.14
South America	3792	100.00	552	28.25	3240	176.29
Marital Status						
Married	123368	102.02	13264	21.29	110104	187.81
Never married	187685	84.42	21040	18.56	166645	152.89
Divorced	22052	95.67	2953	24.89	19099	170.73
Widowed	675	93.58	91	24.53	584	166.70
Housing / neighborhood						
Crowded housing	58676	96.88	6746	21.71	51930	176.05
Not crowded housing	275104	89.77	30602	19.52	244502	163.37
Disadvantaged neighborhood	43484	96.17	5095	21.99	38389	174.14
Not disadvantaged neighborhood	290296	90.21	32253	19.58	258043	164.24

Occupational characteristics						
No work	50511	65.16	4939	12.56	45572	119.34
Low contact / no work from home	13483	79.98	1339	15.52	12144	147.52
Low contact / work from home	36826	78.51	3053	12.69	33773	147.82
Medium contact	143208	89.72	12400	15.18	130808	167.88
High contact	89752	135.73	15617	45.73	74135	231.87
Medical conditions						
Not medical risk group	293666	89.86	32015	19.14	261651	163.96
Medical risk group	40114	99.74	5333	25.83	34781	177.67
Cardiovascular	12779	102.74	1778	27.79	11001	182.08
Cancer	3140	99.13	403	24.67	2737	178.45
Psychiatric	32519	76.21	3969	18.28	28550	136.22
Functional limitation	1666	70.81	355	29.62	1311	113.57
County						
Blekinge	4279	82.61	9171	19.47	73753	165.17
Dalarna	6654	73.30	311	11.76	3968	156.46
Gotland	1130	61.35	2193	8.63	54830	228.34
Gävleborg	10279	112.76	1007	17.99	10222	191.05
Halland	11229	102.56	9040	28.20	50517	165.30
Jämtland	2962	68.99	560	11.92	4097	89.71
Jönköping	12815	103.77	1207	22.23	7742	149.28
Kalmar	5267	68.32	1217	25.67	7344	162.68
Kronoberg	6738	97.36	883	19.08	5771	129.68
Norrbotten	5787	70.97	1361	29.11	8918	200.83
Skåne	57023	115.40	775	19.57	6249	164.93
Stockholm	82924	90.37	567	25.95	2395	113.58
SöderMenland	6229	64.97	472	9.39	6612	135.97
Uppsala	12534	86.30	634	15.29	5153	128.59
Värmland	4657	50.26	1826	24.56	10708	151.03
Västerbotten	7084	71.62	973	19.96	5256	111.54
Västernorrland	7024	90.65	1713	20.07	10385	126.29
Västmanlands	8561	92.50	2342	36.99	10473	174.05
Västra Götaland	59557	95.11	625	17.64	6113	181.00
Örebro	8949	84.30	337	8.60	4930	130.01
Östergötland	12098	72.20	134	14.30	996	110.09

HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's COVID-19 program, data from SmiNet, Statistics Sweden, National Board of Health and Welfare

Age group 50-69

	March 2020 – February 2021		March 2020 – August 2020		September 2020 – February 2021	
	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years
Total	**166567**	**70.79**	**23474**	**19.48**	**143093**	**124.62**
Gender						
Women (Ref.)	86070	73.47	13190	21.98	72880	127.54
Men	80497	68.12	10284	17.00	70213	121.73
Education						
Primary	21115	62.63	3140	18.21	17975	109.13
Secondary (Ref.)	79923	70.66	11043	19.07	68880	124.76
Post-secondary	64449	74.56	9067	20.47	55382	131.41
Income quartile						
Lowest	32511	55.85	5234	17.58	27277	95.89
2nd	45414	77.25	6693	22.22	38721	135.09
3rd	45399	76.81	5986	19.77	39413	136.73
Highest	43243	73.04	5561	18.34	37682	130.46
Country of birth						
Sweden	125250	65.87	16354	16.82	108896	117.20
HIC	11406	61.68	1728	18.24	9678	107.33
LMIC MENA	18539	103.07	3287	35.44	15252	175.03
LMIC other	11372	131.09	2105	46.79	9267	221.89
Africa	3210	89.90	825	44.91	2385	137.56
Asia	17127	118.23	2943	39.28	14184	202.82
EU28 without Nordics	4732	60.23	618	15.35	4114	107.40
Europe without EU28 and Nordics	8678	110.68	1436	35.48	7242	190.90
Nordics without Sweden	4714	56.27	742	17.31	3972	97.10
North America	673	69.38	104	20.87	569	120.59
South America	2183	106.29	452	42.62	1731	174.27
Marital Status						
Married	97918	78.49	13322	20.83	84596	139.16
Never married	34322	57.82	4891	16.13	29431	101.36
Divorced	31138	68.19	4761	20.36	26377	118.38
Widowed	3189	57.57	500	17.67	2689	99.26
Housing / neighborhood						
Crowded housing	11636	94.17	1898	29.81	9738	162.58
Not crowded housing	154931	69.49	21576	18.91	133355	122.54
Disadvantaged neighborhood	17084	83.99	2968	28.40	14116	142.73
Not disadvantaged neighborhood	149483	69.54	20506	18.63	128977	122.92

Occupational characteristics						
No work	27131	50.65	4360	15.93	22771	86.93
Low contact / no work from home	9290	67.34	1193	16.91	8097	120.12
Low contact / work from home	19175	65.14	1984	13.18	17191	119.50
Medium contact	67050	68.54	7089	14.17	59961	125.46
High contact	43921	107.95	8848	42.17	35073	177.99
Medical conditions						
Not medical risk group	97707	72.15	12644	18.24	85063	128.71
Medical risk group	68860	68.93	10830	21.17	58030	119.09
Cardiovascular	25945	69.12	4384	22.78	21561	117.88
Cancer	8344	65.60	1302	19.90	7042	113.98
Psychiatric	12810	60.88	2283	21.18	10527	102.58
Functional limitation	1162	88.63	337	49.69	825	130.33
County						
Blekinge	2201	57.46	187	9.56	2014	107.44
Dalarna	3857	54.35	620	17.11	3237	93.20
Gotland	808	51.44	75	9.35	733	95.39
Gävleborg	5946	83.77	917	25.18	5029	145.49
Halland	5969	75.09	663	16.30	5306	136.66
Jämtland	1521	47.63	327	20.09	1194	76.28
Jönköping	6770	81.75	1279	30.09	5491	136.25
Kalmar	3043	49.52	269	8.59	2774	92.05
Kronoberg	3282	72.80	361	15.63	2921	132.87
Norrbotten	3501	54.83	513	15.74	2988	95.57
Skåne	26443	86.12	1306	8.29	25137	168.16
Stockholm	38944	76.75	6374	24.47	32570	131.88
Södermanland	3744	53.18	754	20.99	2990	86.73
Uppsala	5818	70.81	1018	24.17	4800	119.86
Värmland	2388	33.86	366	10.21	2022	58.32
Västerbotten	3056	48.90	249	7.83	2807	91.49
Västernorrland	3991	65.36	515	16.49	3476	116.51
Västmanlands	4482	69.55	835	25.28	3647	116.09
Västra Götaland	29661	75.60	5007	24.91	24654	128.82
Örebro	4334	62.62	775	21.88	3559	105.31
Östergötland	6808	64.58	1064	19.75	5744	111.44

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Calculations within SU's COVID-19 program, data from SmiNet, Statistics Sweden, National Board of Health and Welfare

Age group 70-84

	March 2020 – February 2021		March 2020 – August 2020		September 2020 – February 2021	
	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years
Total	**38628**	**30.03**	**8916**	**13.58**	**29712**	**47.17**
Gender						
Women (Ref.)	18920	28.09	4224	12.31	14696	44.49
Men	19708	32.16	4692	14.98	15016	50.12
Education						
Primary	12456	33.03	3078	15.96	9378	50.91
Secondary (Ref.)	15361	28.68	3507	12.84	11854	45.18
Post-secondary	9682	27.05	1968	10.80	7714	43.89
Income quartile						
Lowest	10321	32.27	2610	15.97	7711	49.30
2nd	9396	29.30	2291	13.99	7105	45.29
3rd	9067	28.10	1971	11.98	7096	44.87
Highest	9844	30.46	2044	12.41	7800	49.21
Country of birth						
Sweden	31048	27.64	6837	11.93	24211	43.98
HIC	3751	32.94	989	16.98	2762	49.65
LMIC MENA	2296	64.18	599	32.58	1697	97.59
LMIC other	1533	115.52	491	71.34	1042	163.12
Africa	366	71.59	138	52.60	228	91.59
Asia	1962	93.68	570	52.72	1392	137.39
EU28 without Nordics	1369	33.53	323	15.48	1046	52.41
Europe without EU28 and Nordics	1402	65.11	360	32.49	1042	99.71
Nordics without Sweden	2136	31.83	592	17.24	1544	47.12
North America	57	28.00	<15	13.46	43	43.17
South America	288	53.81	82	29.90	206	78.95
Marital Status						
Married	20146	28.20	4040	11.10	16106	45.96
Never married	3956	29.25	1104	15.97	2852	43.14
Divorced	7957	32.81	1998	16.11	5959	50.27
Widowed	6569	33.83	1774	17.86	4795	50.56
Housing / neighborhood						
Crowded housing	1153	58.36	345	33.86	808	84.44
Not crowded housing	37475	29.59	8571	13.26	28904	46.59
Disadvantaged neighborhood	4662	50.60	1349	28.51	3313	73.92
Not disadvantaged neighborhood	33966	28.44	7567	12.42	26399	45.12

Care status						
No care	25253	21.95	4353	7.41	20900	37.09
Home care	7052	66.96	2175	40.89	4877	93.56
Institutional care	6323	207.59	2388	148.50	3935	273.68
Medical conditions						
Not medical risk group	6104	19.60	942	5.96	5162	33.63
Medical risk group	32524	33.36	7974	16.00	24550	51.53
Cardiovascular	19697	39.12	5419	20.97	14278	58.24
Cancer	6707	32.63	1646	15.58	5061	50.65
Psychiatric	7255	70.56	2568	47.92	4687	95.20
County						
Blekinge	448	18.70	52	4.26	396	33.68
Dalarna	894	20.10	222	9.80	672	30.78
Gotland	198	20.49	<15	2.64	185	39.03
Gävleborg	1597	36.63	345	15.47	1252	58.78
Halland	1136	24.82	134	5.75	1002	44.62
Jämtland	389	20.26	94	9.60	295	31.34
Jönköping	1528	32.92	349	14.73	1179	51.88
Kalmar	675	17.57	126	6.45	549	29.10
Kronoberg	795	30.52	141	10.60	654	51.30
Norrbotten	854	22.64	189	9.82	665	36.00
Skåne	5395	32.14	434	5.06	4961	60.40
Stockholm	9827	41.80	3205	26.67	6622	57.61
Södermanland	985	23.09	328	15.09	657	31.41
Uppsala	1382	30.88	336	14.71	1046	47.72
Värmland	553	13.22	123	5.78	430	20.93
Västerbotten	610	16.99	48	2.63	562	31.89
Västernorrland	1019	27.33	237	12.45	782	42.85
Västmanlands	1014	26.77	262	13.56	752	40.55
Västra Götaland	6578	31.75	1578	14.93	5000	49.29
Örebro	1007	24.46	257	12.24	750	37.18
Östergötland	1744	29.33	443	14.61	1301	44.65

HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's COVID-19 program, data from SmiNet, Statistics Sweden, National Board of Health and Welfare

Age group 85+

	March 2020 – February 2021		March 2020 – August 2020		September 2020 – February 2021	
	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years
Total	**20331**	**75.45**	**7276**	**51.15**	**13055**	**102.63**
Gender						
Women (Ref.)	13233	77.32	4769	52.86	8464	104.58
Men	7098	72.19	2507	48.17	4591	99.21
Education						
Primary	9848	76.99	3422	50.49	6426	106.85
Secondary (Ref.)	6651	74.76	2433	51.89	4218	100.24
Post-secondary	3271	69.25	1195	48.28	2076	92.34
Income quartile						
Lowest	4597	67.70	1524	42.61	3073	95.61
2nd	4973	74.11	1772	49.96	3201	101.19
3rd	5160	76.64	1862	52.39	3298	103.76
Highest	5601	83.42	2118	59.67	3483	110.04
Country of birth						
Sweden	17482	73.49	6134	48.85	11348	101.04
HIC	2060	82.98	801	61.14	1259	107.38
LMIC MENA	519	100.23	216	78.82	303	124.30
LMIC other	270	170.31	125	148.12	145	195.56
Africa	39	78.06	21	80.86	18	75.03
Asia	378	138.60	168	116.34	210	163.65
EU28 without Nordics	817	83.57	302	58.59	515	111.43
Europe without EU28 and Nordics	359	105.08	147	80.88	212	132.59
Nordics without Sweden	1159	83.97	463	63.49	696	106.92
North America	42	55.34	<15	35.17	28	77.57
South America	55	90.44	27	84.76	28	96.70
Marital Status						
Married	5184	62.74	1668	38.54	3516	89.36
Never married	1108	78.17	441	58.59	667	100.33
Divorced	2677	82.24	1015	59.09	1662	108.11
Widowed	11362	81.09	4152	55.90	7210	109.50
Housing / neighborhood						
Crowded housing	743	159.10	303	117.65	440	210.06
Not crowded housing	19588	73.97	6973	49.92	12615	100.83
Disadvantaged neighborhood	2102	100.27	773	69.30	1329	135.48
Not disadvantaged neighborhood	18229	73.35	6503	49.60	11726	99.88

Care status						
No care	2832	22.00	765	11.34	2067	33.74
Home care	7217	76.18	2441	49.31	4776	105.59
Institutional care	10282	223.37	4070	160.75	6212	299.90
Medical conditions						
Not medical risk group	1283	44.66	396	26.59	887	64.12
Medical risk group	19048	79.12	6880	54.02	12168	107.32
Cardiovascular	14163	89.79	5292	62.95	8871	120.43
Cancer	4147	77.04	1454	50.80	2693	106.84
Psychiatric	5753	168.63	2523	133.58	3230	212.10
County						
Blekinge	197	37.13	34	12.19	163	64.76
Dalarna	453	49.56	189	39.30	264	60.95
Gotland	75	38.97	<15	5.95	69	75.32
Gävleborg	742	84.86	220	47.58	522	126.67
Halland	569	57.57	125	24.06	444	94.72
Jämtland	184	46.80	89	42.93	95	51.11
Jönköping	835	77.35	267	46.78	568	111.65
Kalmar	364	43.41	90	20.42	274	68.89
Kronoberg	503	81.45	175	53.49	328	112.95
Norrbotten	315	40.16	94	22.79	221	59.40
Skåne	2524	70.23	352	18.55	2172	128.05
Stockholm	5580	122.60	2745	113.67	2835	132.70
Södermanland	479	57.27	238	54.24	241	60.61
Uppsala	807	92.04	332	71.65	475	114.89
Värmland	325	33.68	109	21.51	216	47.13
Västerbotten	279	36.70	42	10.52	237	65.68
Västernorrland	644	84.43	179	44.22	465	129.91
Västmanlands	565	70.69	231	54.73	334	88.56
Västra Götaland	3517	78.43	1218	51.43	2299	108.65
Örebro	512	62.63	214	49.61	298	77.19
Östergötland	862	66.99	327	48.25	535	87.84

HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's COVID-19 program, data from SmiNet, Statistics Sweden, National Board of Health and Welfare

Incidence of admission to hospital with COVID-19

Age group 21-49

	March 2020 – February 2021		March 2020 – August 2020		September 2020 – February 2021	
	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years
Total	**6197**	**1.65**	**2992**	**1.59**	**3205**	1.72
Gender						
Women (Ref.)	2594	1.41	1254	1.36	1340	1.47
Men	3603	1.88	1738	1.81	1865	1.96
Education						
Primary	1192	3.14	604	3.17	588	3.10
Secondary (Ref.)	2617	1.65	1269	1.60	1348	1.71
Post-secondary	2110	1.26	989	1.17	1121	1.36
Income quartile						
Lowest	2194	2.38	1019	2.19	1175	2.57
2nd	1629	1.74	799	1.70	830	1.78
3rd	1250	1.32	605	1.28	645	1.37
Highest	1124	1.18	569	1.19	555	1.18
Country of birth						
Sweden	2985	1.07	1410	1.01	1575	1.14
HIC	397	1.56	189	1.46	208	1.66
LMIC MENA	1526	3.36	742	3.25	784	3.47
LMIC other	1289	4.99	651	5.00	638	4.97
Africa	430	3.30	258	3.94	172	2.65
Asia	1833	4.22	851	3.90	982	4.54
EU28 without Nordics	217	1.31	104	1.23	113	1.38
Europe without EU28 and Nordics	481	3.59	231	3.42	250	3.77
Nordics without Sweden	48	1.13	24	1.10	24	1.15
North America	46	2.27	20	1.94	26	2.60
South America	157	4.04	94	4.79	63	3.28
Marital Status	2998	2.42	1411	2.25	1587	2.59
Married	2371	1.04	1162	1.02	1209	1.07
Never married	804	3.41	408	3.42	396	3.39
Divorced	24	3.25	<15	2.95	<15	3.56
Widowed	2998	2.42	1411	2.25	1587	2.59
Housing / neighborhood						
Crowded housing	1669	2.69	851	2.73	818	2.66
Not crowded housing	4528	1.45	2141	1.36	2387	1.53
Disadvantaged neighborhood	1461	3.16	751	3.23	710	3.09
Not disadvantaged neighborhood	4736	1.44	2241	1.36	2495	1.53

Occupational characteristics						
No work	1733	2.20	803	2.04	930	2.37
Low contact / no work from home	326	1.90	169	1.95	157	1.84
Low contact / work from home	560	1.17	255	1.06	305	1.29
Medium contact	2125	1.30	1029	1.26	1096	1.35
High contact	1453	2.12	736	2.13	717	2.10
Medical conditions						
No medical risk group	4201	1.26	2082	1.24	2119	1.28
Medical risk group	1996	4.85	910	4.39	1086	5.31
Cardiovascular	658	5.16	306	4.76	352	5.57
Cancer	142	4.38	60	3.65	82	5.12
Psychiatric	1062	2.44	504	2.31	558	2.57
Functional limitation	184	7.67	77	6.38	107	8.98
County						
Blekinge	53	1.00	<15	0.26	46	1.75
Dalarna	131	1.42	84	1.81	47	1.02
Gotland	18	0.96	<15	0.21	<15	1.71
Gävleborg	171	1.83	81	1.72	90	1.93
Halland	137	1.22	54	0.96	83	1.49
Jämtland	64	1.46	32	1.46	32	1.47
Jönköping	277	2.18	111	1.74	166	2.63
Kalmar	114	1.46	52	1.33	62	1.59
Kronoberg	109	1.54	28	0.79	81	2.30
Norrbotten	79	0.95	35	0.84	44	1.07
Skåne	682	1.35	157	0.62	525	2.09
Stockholm	2022	2.15	1133	2.40	889	1.91
Södermanland	235	2.41	146	2.98	89	1.83
Uppsala	237	1.59	129	1.73	108	1.46
Värmland	88	0.94	43	0.91	45	0.96
Västerbotten	102	1.02	33	0.65	69	1.38
Västernorrland	119	1.50	51	1.28	68	1.72
Västmanlands	178	1.88	98	2.06	80	1.69
Västra Götaland	893	1.39	461	1.43	432	1.36
Örebro	194	1.78	114	2.09	80	1.48
Östergötland	294	1.72	141	1.64	153	1.80

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Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Age group 50-69

	March 2020 – February 2021		March 2020 – August 2020		September 2020 – February 2021	
	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years
Total	**13112**	**5.48**	**5914**	**4.89**	**7198**	**6.08**
Gender						
Women (Ref.)	4822	4.04	2157	3.58	2665	4.51
Men	8290	6.92	3757	6.20	4533	7.65
Education						
Primary	2985	8.74	1333	7.71	1652	9.80
Secondary (Ref.)	5881	5.12	2642	4.55	3239	5.70
Post-secondary	3992	4.53	1820	4.09	2172	4.99
Income quartile						
Lowest	4914	8.34	2157	7.23	2757	9.49
2nd	3016	5.04	1383	4.57	1633	5.51
3rd	2711	4.50	1211	3.98	1500	5.03
Highest	2471	4.10	1163	3.82	1308	4.39
Country of birth						
Sweden	7187	3.72	3094	3.17	4093	4.28
HIC	1244	6.63	561	5.90	683	7.39
LMIC MENA	2681	14.57	1262	13.54	1419	15.63
LMIC other	2000	22.43	997	22.05	1003	22.83
Africa	627	17.20	388	20.99	239	13.29
Asia	2690	18.11	1254	16.65	1436	19.60
EU28 without Nordics	458	5.75	189	4.68	269	6.85
Europe without EU28 and Nordics	1244	15.50	562	13.82	682	17.22
Nordics without Sweden	503	5.93	226	5.26	277	6.62
North America	65	6.59	31	6.20	34	7.00
South America	338	16.05	170	15.93	168	16.18
Marital Status						
Married	7368	5.80	3337	5.20	4031	6.41
Never married	2536	4.21	1135	3.73	1401	4.71
Divorced	2854	6.15	1291	5.50	1563	6.82
Widowed	354	6.31	151	5.32	203	7.32
Housing / neighborhood						
Crowded housing	1519	12.04	749	11.72	770	12.38
Not crowded housing	11593	5.12	5165	4.51	6428	5.74
Disadvantaged neighborhood	2725	13.17	1319	12.58	1406	13.77
Not disadvantaged neighborhood	10387	4.75	4595	4.16	5792	5.36

Occupational characteristics						
No work	4665	8.62	2066	7.53	2599	9.74
Low contact / no work from home	687	4.91	312	4.41	375	5.41
Low contact / work from home	991	3.32	460	3.05	531	3.59
Medium contact	4304	4.34	1896	3.78	2408	4.90
High contact	2465	5.88	1180	5.57	1285	6.19
Medical conditions						
Not medical risk group	4719	3.43	2220	3.19	2499	3.66
Medical risk group	8393	8.27	3694	7.20	4699	9.38
Cardiovascular	3970	10.42	1731	8.97	2239	11.92
Cancer	991	7.68	446	6.80	545	8.59
Psychiatric	1941	9.10	863	7.98	1078	10.26
Functional limitation	326	24.35	134	19.58	192	29.32
County						
Blekinge	139	3.59	33	1.68	106	5.53
Dalarna	265	3.68	152	4.18	113	3.17
Gotland	65	4.09	<15	1.62	52	6.61
Gävleborg	380	5.25	173	4.73	207	5.78
Halland	328	4.06	121	2.97	207	5.18
Jämtland	102	3.15	48	2.93	54	3.37
Jönköping	546	6.46	205	4.80	341	8.15
Kalmar	238	3.84	85	2.71	153	4.98
Kronoberg	237	5.17	65	2.80	172	7.58
Norrbotten	219	3.39	97	2.97	122	3.81
Skåne	1504	4.82	320	2.03	1184	7.67
Stockholm	4429	8.57	2406	9.20	2023	7.92
Södermanland	418	5.86	255	7.07	163	4.62
Uppsala	510	6.09	226	5.34	284	6.86
Värmland	178	2.50	84	2.34	94	2.67
Västerbotten	167	2.65	45	1.41	122	3.91
Västernorrland	223	3.60	88	2.81	135	4.40
Västmanlands	384	5.85	197	5.94	187	5.76
Västra Götaland	1863	4.66	874	4.33	989	5.01
Örebro	327	4.64	178	5.00	149	4.28
Östergötland	590	5.51	249	4.60	341	6.44

HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Age group 70-84

	March 2020 – February 2021		March 2020 – August 2020		September 2020 – February 2021	
	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years
Total	**12777**	**9.88**	**4803**	**7.31**	**7974**	12.55
Gender						
Women (Ref.)	5300	7.83	1990	5.79	3310	9.93
Men	7477	12.14	2813	8.97	4664	15.44
Education						
Primary	4631	12.22	1726	8.93	2905	15.63
Secondary (Ref.)	4998	9.29	1846	6.75	3152	11.91
Post-secondary	2609	7.25	985	5.40	1624	9.16
Income quartile						
Lowest	3832	11.92	1518	9.28	2314	14.66
2nd	3267	10.14	1189	7.25	2078	13.14
3rd	2927	9.03	1056	6.41	1871	11.74
Highest	2751	8.47	1040	6.31	1711	10.69
Country of birth						
Sweden	9526	8.44	3476	6.06	6050	10.90
HIC	1479	12.92	561	9.62	918	16.36
LMIC MENA	1052	29.14	396	21.49	656	37.13
LMIC other	720	53.40	370	53.55	350	53.24
Africa	183	35.43	97	36.84	86	33.97
Asia	878	41.37	414	38.17	464	44.72
EU28 without Nordics	542	13.21	193	9.23	349	17.33
Europe without EU28 and Nordics	670	30.85	243	21.88	427	40.23
Nordics without Sweden	831	12.32	321	9.33	510	15.44
North America	17	8.30	<15	6.72	<15	9.94
South America	130	24.09	52	18.92	78	29.47
Marital Status						
Married	6290	8.77	2362	6.48	3928	11.12
Never married	1422	10.46	544	7.85	878	13.17
Divorced	2785	11.42	1029	8.28	1756	14.67
Widowed	2280	11.68	868	8.72	1412	14.75
Housing / neighborhood						
Crowded housing	425	21.29	172	16.82	253	26.00
Not crowded housing	12352	9.71	4631	7.16	7721	12.34
Disadvantaged neighborhood	2074	22.36	890	18.77	1184	26.10
Not disadvantaged neighborhood	10703	8.92	3913	6.42	6790	11.51
Care status						
No care	7571	6.56	2786	4.74	4785	8.44
Home care	3839	36.16	1509	28.29	2330	44.11
Institutional care	1367	42.63	508	30.78	859	55.20

Medical conditions						
Not medical risk group	1278	4.09	467	2.95	811	5.25
Medical risk group	11499	11.73	4336	8.69	7163	14.89
Cardiovascular	7853	15.50	3066	11.84	4787	19.33
Cancer	2566	12.42	951	8.99	1615	16.02
Psychiatric	2478	23.77	988	18.32	1490	29.62
County						
Blekinge	124	5.16	23	1.88	101	8.55
Dalarna	258	5.78	136	6.00	122	5.55
Gotland	59	6.08	<15	0.81	55	11.53
Gävleborg	451	10.28	149	6.67	302	14.01
Halland	268	5.83	64	2.74	204	9.02
Jämtland	99	5.14	39	3.98	60	6.33
Jönköping	538	11.53	177	7.46	361	15.73
Kalmar	216	5.61	77	3.94	139	7.33
Kronoberg	247	9.44	71	5.33	176	13.68
Norrbotten	219	5.78	78	4.05	141	7.58
Skåne	1573	9.33	241	2.81	1332	16.08
Stockholm	4183	17.67	1962	16.29	2221	19.11
Södermanland	402	9.39	210	9.65	192	9.12
Uppsala	418	9.29	165	7.21	253	11.43
Värmland	189	4.51	82	3.85	107	5.19
Västerbotten	133	3.70	24	1.31	109	6.16
Västernorrland	292	7.79	98	5.14	194	10.54
Västmanlands	312	8.20	120	6.20	192	10.26
Västra Götaland	1875	9.00	699	6.60	1176	11.48
Örebro	294	7.11	124	5.90	170	8.36
Östergötland	627	10.49	260	8.56	367	12.49

HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Age group 85+

	March 2020 – February 2021		March 2020 – August 2020		September 2020 – February 2021	
	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years
Total	**6863**	**25.14**	**2702**	**18.88**	**4161**	**32.09**
Gender						
Women (Ref.)	3775	21.72	1507	16.58	2268	27.36
Men	3088	31.12	1195	22.87	1893	40.31
Education						
Primary	3169	24.44	1203	17.64	1966	32.00
Secondary (Ref.)	2296	25.48	893	18.93	1403	32.67
Post-secondary	1145	23.96	485	19.49	660	28.81
Income quartile						
Lowest	1524	22.18	577	16.05	947	28.91
2nd	1677	24.68	666	18.67	1011	31.32
3rd	1831	26.84	715	19.99	1116	34.39
Highest	1831	26.87	744	20.81	1087	33.56
Country of birth						
Sweden	5676	23.56	2192	17.35	3484	30.39
HIC	767	30.46	308	23.34	459	38.29
LMIC MENA	250	47.62	108	39.15	142	57.00
LMIC other	170	105.21	94	110.53	76	99.29
Africa	19	37.59	<15	45.94	<15	28.65
Asia	222	80.05	109	74.89	113	85.75
EU28 without Nordics	316	31.91	128	24.68	188	39.86
Europe without EU28 and Nordics	168	48.42	72	39.33	96	58.57
Nordics without Sweden	420	29.97	166	22.58	254	38.11
North America	<15	16.96	<15	10.00	<15	24.58
South America	29	47.17	19	59.34	<15	33.94
Marital Status						
Married	2153	25.83	814	18.74	1339	33.54
Never married	360	25.04	154	20.32	206	30.31
Divorced	939	28.45	384	22.20	555	35.33
Widowed	3411	23.97	1350	18.04	2061	30.56
Housing / neighborhood						
Crowded housing	150	31.04	56	21.37	94	42.50
Not crowded housing	6713	25.03	2646	18.83	4067	31.86
Disadvantaged neighborhood	776	36.44	316	28.13	460	45.72
Not disadvantaged neighborhood	6087	24.18	2386	18.09	3701	30.89
Care status						
No care	1516	11.75	572	8.48	944	15.35
Home care	3893	40.77	1623	32.69	2270	49.52
Institutional care	1454	29.95	507	19.48	947	42.03

Medical conditions						
Not medical risk group	394	13.61	138	9.23	256	18.27
Medical risk group	6469	26.51	2564	20.00	3905	33.71
Cardiovascular	5094	31.82	2087	24.65	3007	39.87
Cancer	1667	30.62	664	23.08	1003	39.06
Psychiatric	1454	41.17	622	32.32	832	51.76
County						
Blekinge	74	13.89	17	6.09	57	22.45
Dalarna	149	16.16	80	16.57	69	15.71
Gotland	26	13.43	0	0.00	26	28.06
Gävleborg	199	22.41	62	13.33	137	32.41
Halland	150	15.04	42	8.06	108	22.69
Jämtland	39	9.80	19	9.11	20	10.55
Jönköping	277	25.31	99	17.24	178	34.21
Kalmar	127	15.06	41	9.28	86	21.40
Kronoberg	143	22.79	39	11.83	104	34.92
Norrbotten	100	12.67	31	7.50	69	18.36
Skåne	791	21.80	123	6.47	668	38.71
Stockholm	2427	52.21	1216	49.73	1211	54.96
Södermanland	171	20.20	84	19.00	87	21.51
Uppsala	240	26.87	108	23.09	132	31.03
Värmland	139	14.34	68	13.40	71	15.37
Västerbotten	65	8.50	<15	3.25	52	14.26
Västernorrland	157	20.28	48	11.79	109	29.71
Västmanlands	192	23.69	76	17.89	116	30.09
Västra Götaland	978	21.49	346	14.51	632	29.19
Örebro	135	16.29	61	14.04	74	18.77
Östergötland	284	21.84	129	18.94	155	25.03

HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Incidence of ICU admissions with COVID-19

Age group 21-49

	March 2020 – February 2021		March 2020 – August 2020		September 2020 – February 2021	
	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years
Total	**770**	**0.21**	**433**	**0.23**	**337**	**0.18**
Gender						
Women (Ref.)	275	0.15	147	0.16	128	0.14
Men	495	0.26	286	0.30	209	0.22
Education						
Primary	199	0.12	115	0.14	84	0.10
Secondary (Ref.)	176	0.46	94	0.49	82	0.43
Post-secondary	343	0.22	196	0.25	147	0.19
Income quartile						
Lowest	314	0.34	161	0.35	153	0.33
2nd	202	0.22	107	0.23	95	0.20
3rd	129	0.14	77	0.16	52	0.11
Highest	125	0.13	88	0.18	37	0.08
Country of birth						
Sweden	409	0.15	217	0.16	192	0.14
HIC	43	0.17	20	0.15	23	0.18
LMIC MENA	185	0.41	117	0.51	68	0.30
LMIC other	133	0.51	79	0.61	54	0.42
Africa	64	0.49	41	0.63	23	0.35
Asia	196	0.45	111	0.51	85	0.39
EU28 without Nordics	22	0.13	<15	0.11	<15	0.16
Europe without EU28 and Nordics	56	0.42	38	0.56	18	0.27
Nordics without Sweden	<15	0.09	<15	0.05	<15	0.14
North America	<15	0.05	<15	0.10	<15	0.00
South America	18	0.46	15	0.76	<15	0.16
Marital Status						
Married	310	0.25	172	0.27	138	0.22
Never married	358	0.16	209	0.18	149	0.13
Divorced	96	0.41	49	0.41	47	0.40
Widowed	<15	0.81	<15	0.80	<15	0.82
Housing / neighborhood						
Crowded housing	190	0.31	107	0.34	83	0.27
Not crowded housing	580	0.19	326	0.21	254	0.16
Disadvantaged neighborhood	193	0.42	114	0.49	79	0.34
Not disadvantaged neighborhood	577	0.18	319	0.19	258	0.16

Occupational characteristics						
No work	262	0.33	136	0.34	126	0.32
Low contact / no work from home	40	0.23	22	0.25	18	0.21
Low contact / work from home	58	0.12	34	0.14	24	0.10
Medium contact	254	0.16	141	0.17	113	0.14
High contact	156	0.23	100	0.29	56	0.16
Medical conditions						
Not medical risk group	449	0.13	262	0.16	187	0.11
Medical risk group	321	0.78	171	0.82	150	0.73
Cardiovascular	89	0.70	40	0.62	49	0.77
Cancer	<15	0.37	<15	0.30	<15	0.44
Psychiatric	166	0.38	90	0.41	76	0.35
Functional limitation	42	1.75	21	1.74	21	1.76
County						
Blekinge	<15	0.04	<15	0.00	<15	0.08
Dalarna	<15	0.13	<15	0.13	<15	0.13
Gotland	<15	0.11	<15	0.00	<15	0.21
Gävleborg	27	0.29	<15	0.25	15	0.32
Halland	15	0.13	<15	0.12	<15	0.14
Jämtland	<15	0.09	<15	0.18	<15	0.00
Jönköping	39	0.31	16	0.25	23	0.36
Kalmar	<15	0.15	<15	0.15	<15	0.15
Kronoberg	<15	0.10	<15	0.06	<15	0.14
Norrbotten	16	0.19	<15	0.24	<15	0.15
Skåne	57	0.11	<15	0.05	45	0.18
Stockholm	231	0.25	159	0.34	72	0.15
Södermanland	49	0.50	30	0.61	19	0.39
Uppsala	39	0.26	28	0.37	<15	0.15
Värmland	<15	0.07	<15	0.06	<15	0.09
Västerbotten	15	0.15	<15	0.12	<15	0.18
Västernorrland	15	0.19	<15	0.13	<15	0.25
Västmanlands	19	0.20	<15	0.23	<15	0.17
Västra Götaland	143	0.22	80	0.25	63	0.20
Örebro	27	0.25	20	0.37	<15	0.13
Östergötland	32	0.19	16	0.19	16	0.19

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Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Age group 50-69

	March 2020 – February 2021		March 2020 – August 2020		September 2020 – February 2021	
	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years
Total	**2541**	1.06	**1365**	**1.13**	**1176**	0.99
Gender						
Women (Ref.)	667	0.56	341	0.57	326	0.55
Men	1874	1.56	1024	1.69	850	1.43
Education						
Primary	606	1.77	313	1.81	293	1.73
Secondary (Ref.)	1171	1.02	631	1.09	540	0.95
Post-secondary	712	0.81	398	0.89	314	0.72
Income quartile						
Lowest	971	1.64	503	1.68	468	1.60
2nd	553	0.92	307	1.01	246	0.83
3rd	559	0.93	298	0.98	261	0.87
Highest	458	0.76	257	0.84	201	0.67
Country of birth						
Sweden	1410	0.73	708	0.73	702	0.73
HIC	245	1.30	124	1.30	121	1.30
LMIC MENA	480	2.59	271	2.90	209	2.28
LMIC other	406	4.52	262	5.76	144	3.24
Africa	151	4.11	115	6.19	36	1.98
Asia	491	3.28	283	3.74	208	2.81
EU28 without Nordics	86	1.08	42	1.04	44	1.12
Europe without EU28 and Nordics	216	2.68	115	2.82	101	2.53
Nordics without Sweden	112	1.32	55	1.28	57	1.36
North America	<15	1.42	<15	1.80	<15	1.03
South America	61	2.88	38	3.55	23	2.20
Marital Status						
Married	1480	1.16	799	1.24	681	1.08
Never married	510	0.85	268	0.88	242	0.81
Divorced	487	1.05	265	1.13	222	0.97
Widowed	64	1.14	33	1.16	31	1.11
Housing / neighborhood						
Crowded housing	311	2.45	198	3.09	113	1.81
Not crowded housing	2230	0.98	1167	1.02	1063	0.95
Disadvantaged neighborhood	565	2.72	320	3.04	245	2.38
Not disadvantaged neighborhood	1976	0.90	1045	0.95	931	0.86

Occupational characteristics						
No work	909	1.67	477	1.74	432	1.61
Low contact / no work from home	147	1.05	82	1.16	65	0.94
Low contact / work from home	175	0.59	102	0.68	73	0.49
Medium contact	897	0.90	461	0.92	436	0.89
High contact	413	0.98	243	1.15	170	0.82
Medical conditions						
Not medical risk group	837	0.61	497	0.71	340	0.50
Medical risk group	1704	1.68	868	1.69	836	1.66
Cardiovascular	800	2.09	381	1.97	419	2.22
Cancer	184	1.42	88	1.34	96	1.51
Psychiatric	334	1.56	164	1.51	170	1.61
Functional limitation	38	2.82	18	2.62	20	3.02
County						
Blekinge	21	0.54	<15	0.26	16	0.83
Dalarna	57	0.79	41	1.13	16	0.45
Gotland	<15	0.88	<15	0.50	<15	1.27
Gävleborg	70	0.97	31	0.85	39	1.09
Halland	58	0.72	26	0.64	32	0.80
Jämtland	20	0.62	<15	0.43	<15	0.81
Jönköping	104	1.23	42	0.98	62	1.48
Kalmar	35	0.56	15	0.48	20	0.65
Kronoberg	37	0.81	<15	0.47	26	1.14
Norrbotten	70	1.08	34	1.04	36	1.12
Skåne	216	0.69	65	0.41	151	0.98
Stockholm	810	1.56	524	2.00	286	1.11
Södermanland	125	1.75	78	2.16	47	1.33
Uppsala	105	1.25	68	1.60	37	0.89
Värmland	31	0.44	16	0.45	15	0.43
Västerbotten	41	0.65	18	0.56	23	0.74
Västernorrland	48	0.77	24	0.77	24	0.78
Västmanlands	48	0.73	28	0.84	20	0.61
Västra Götaland	451	1.13	226	1.12	225	1.14
Örebro	67	0.95	41	1.15	26	0.74
Östergötland	113	1.05	61	1.13	52	0.98

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Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Age group 70-84

	March 2020 – February 2021		March 2020 – August 2020		September 2020 – February 2021	
	Number of cases	**Rate per 1000 person-years**	**Number of cases**	**Rate per 1000 person-years**	**Number of cases**	**Rate per 1000 person-years**
Total	1601	1.24	662	0.94	979	1.53
Gender						
Women (Ref.)	466	0.69	174	0.51	292	0.87
Men	1135	1.84	448	1.43	687	2.26
Education						
Primary	561	1.48	205	1.06	356	1.91
Secondary (Ref.)	636	1.18	240	0.88	396	1.49
Post-secondary	335	0.93	146	0.80	189	1.06
Income quartile						
Lowest	516	1.60	206	1.26	310	1.95
2nd	384	1.19	140	0.85	244	1.54
3rd	349	1.07	128	0.78	221	1.38
Highest	352	1.08	148	0.90	204	1.27
Country of birth						
Sweden	1103	0.97	418	0.73	685	1.23
HIC	201	1.75	81	1.39	120	2.13
LMIC MENA	168	4.62	57	3.08	111	6.21
LMIC other	129	9.40	66	9.45	63	9.35
Africa	39	7.48	28	10.56	<15	4.29
Asia	151	7.02	62	5.67	89	8.41
EU28 without Nordics	86	2.09	34	1.62	52	2.57
Europe without EU28 and Nordics	104	4.75	31	2.78	73	6.79
Nordics without Sweden	89	1.32	34	0.99	55	1.66
North America	<15	0.00	<15	0.00	<15	0.00
South America	29	5.34	15	5.44	<15	5.24
Marital Status						
Married	930	1.29	360	0.99	570	1.61
Never married	162	1.19	58	0.84	104	1.55
Divorced	319	1.30	126	1.01	193	1.61
Widowed	190	0.97	78	0.78	112	1.16
Housing / neighborhood						
Crowded housing	58	2.89	25	2.44	33	3.36
Not crowded housing	1543	1.21	597	0.92	946	1.51
Disadvantaged neighborhood	283	3.03	116	2.44	167	3.65
Not disadvantaged neighborhood	1318	1.10	506	0.83	812	1.37
Care status						
No care	1330	1.15	523	0.89	807	1.42
Home care	246	2.29	88	1.64	158	2.94
Institutional care	25	0.77	<15	0.66	<15	0.88

Medical conditions						
Not medical risk group	250	0.80	112	0.71	138	0.89
Medical risk group	1351	1.37	510	1.02	841	1.74
Cardiovascular	816	1.60	300	1.16	516	2.07
Cancer	259	1.25	83	0.78	176	1.74
Psychiatric	137	1.31	49	0.91	88	1.73
County						
Blekinge	<15	0.50	<15	0.25	<15	0.76
Dalarna	30	0.67	21	0.93	<15	0.41
Gotland	<15	1.03	<15	0.61	<15	1.46
Gävleborg	54	1.23	19	0.85	35	1.62
Halland	33	0.72	<15	0.30	26	1.15
Jämtland	18	0.93	<15	0.61	<15	1.26
Jönköping	76	1.62	28	1.18	48	2.08
Kalmar	17	0.44	<15	0.51	<15	0.37
Kronoberg	36	1.37	<15	0.75	26	2.01
Norrbotten	40	1.05	15	0.78	25	1.34
Skåne	164	0.97	33	0.38	131	1.58
Stockholm	434	1.82	191	1.58	243	2.07
Södermanland	50	1.16	26	1.19	24	1.14
Uppsala	86	1.91	43	1.88	43	1.94
Värmland	31	0.74	<15	0.61	18	0.87
Västerbotten	25	0.69	<15	0.33	19	1.07
Västernorrland	40	1.07	17	0.89	23	1.25
Västmanlands	19	0.50	<15	0.62	<15	0.37
Västra Götaland	316	1.51	113	1.07	203	1.98
Örebro	41	0.99	19	0.90	22	1.08
Östergötland	69	1.15	27	0.89	42	1.42

HIC: High income country; LMIC: Low or middle income country; MENA: Middle East or North African Region

Calculations within SU's COVID-19 program, data from Statistics Sweden, National Board of Health and Welfare

Age group 85+

	March 2020 – February 2021		March 2020 – August 2020		September 2020 – February 2021	
	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years	Number of cases	Rate per 1000 person-years
Total	80	0.29	34	0.24	46	0.25
Gender						
Women (Ref.)	30	0.17	17	0.19	<15	0.16
Men	50	0.50	17	0.32	33	0.70
Education						
Primary	30	0.23	<15	0.18	18	0.29
Secondary (Ref.)	29	0.32	<15	0.21	19	0.44
Post-secondary	19	0.40	<15	0.48	<15	0.30
Income quartile						
Lowest	17	0.25	<15	0.08	<15	0.42
2nd	15	0.22	<15	0.28	<15	0.15
3rd	25	0.36	<15	0.31	<15	0.43
Highest	23	0.34	<15	0.28	<15	0.40
Country of birth						
Sweden	71	0.29	33	0.26	38	0.33
HIC	<15	0.16	0	0.00	<15	0.33
LMIC MENA	<15	0.75	<15	0.36	<15	1.18
LMIC other	<15	0.60	0	0.00	<15	1.25
Africa	<15	1.96	0	0.00	<15	4.05
Asia	<15	0.71	0	0.00	<15	1.47
EU28 without Nordics	<15	0.30	<15	0.19	<15	0.42
Europe without EU28 and Nordics	<15	0.28	0	0.00	<15	0.60
Nordics wo Sweden	<15	0.14	0	0.00	<15	0.30
North America	0	0.00	0	0.00	0	0.00
South America	0	0.00	0	0.00	0	0.00
Marital Status						
Married	36	0.43	<15	0.25	25	0.62
Never married	<15	0.28	<15	0.26	<15	0.29
Divorced	15	0.45	<15	0.35	<15	0.57
Widowed	25	0.17	15	0.20	<15	0.15
Housing / neighborhood						
Crowded housing	0	0.00	0	0.00	0	0.00
Not crowded housing	80	0.30	34	0.24	46	0.36
Disadvantaged neighborhood	<15	0.37	<15	0.18	<15	0.59
Not disadvantaged neighborhood	72	0.28	32	0.24	40	0.33
Care status						
No care	43	0.33	19	0.28	24	0.39
Home care	35	0.36	15	0.30	20	0.43
Institutional care	<15	0.04	0	0.00	<15	0.09

Medical conditions						
Not medical risk group	<15	0.34	<15	0.27	<15	0.43
Medical risk group	70	0.29	30	0.23	40	0.34
Cardiovascular	53	0.33	22	0.26	31	0.41
Cancer	15	0.27	<15	0.28	<15	0.27
Psychiatric	<15	0.20	<15	0.21	<15	0.18
County						
Blekinge	<15	0.37	<15	0.36	<15	0.39
Dalarna	<15	0.22	<15	0.21	<15	0.23
Gotland	0	0.00	0	0.00	0	0.00
Gävleborg	<15	0.11	0	0.00	<15	0.24
Halland	<15	0.20	0	0.00	<15	0.42
Jämtland	0	0.00	0	0.00	0	0.00
Jönköping	<15	0.55	<15	0.35	<15	0.76
Kalmar	0	0.00	0	0.00	0	0.00
Kronoberg	<15	0.16	0	0.00	<15	0.33
Norrbotten	<15	0.13	0	0.00	<15	0.27
Skåne	<15	0.27	<15	0.21	<15	0.35
Stockholm	20	0.42	<15	0.36	<15	0.49
Södermanland	<15	0.24	0	0.00	<15	0.49
Uppsala	<15	0.78	<15	0.85	<15	0.70
Värmland	<15	0.21	<15	0.39	0	0.00
Västerbotten	<15	0.39	<15	0.50	<15	0.27
Västernorrland	<15	0.26	<15	0.25	<15	0.27
Västmanlands	0	0.00	0	0.00	0	0.00
Västra Götaland	16	0.35	<15	0.21	<15	0.50
Örebro	0	0.00	0	0.00	0	0.00
Östergötland	<15	0.23	<15	0.44	0	0.00

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