

Main population groups	Definition	Years	Data sources*	Type of accommodation (§)/Diagnosis and drug coding system	Data authority
<b>Low educational level</b>					Statistics Denmark
Yes	Primary school	Sep 2019	Register information on highest educational level from the IDA database		
No	Higher than primary school (missing values included)				
<b>Homelessness</b>					
	Experience of homelessness	2018-2020	Postal address*/The Danish Homeless Register <sup>1</sup> /The Registry of Drug Abusers Undergoing Treatment <sup>2</sup> /The National Registry of Alcohol Treatment <sup>3</sup>	the Act of Social Services §110; self-reported homelessness	Statistics Denmark/ The Danish Health Data Authority
	No experience of homelessness	2018-2020	No information on homelessness based on the sources above		
<b>History of homelessness</b>					
	Any history of homelessness	1996-2020	Postal address*/The Danish Homeless Register/The Registry of Drug Abusers Undergoing Treatment <sup>2</sup> /The National Registry of Alcohol Treatment <sup>3</sup>		
	No history of homelessness	1996-2020	No information on homelessness based on the sources above		
<b>Imprisonment</b>					
	Imprisonment	2018-2020	The Danish Central Criminal Register <sup>4</sup>		Statistics Denmark
	No history of imprisonment	2018-2020			
<b>Substance abuse</b>					
	Any alcohol or drug use disorder	1969-2020 (Feb 27)	The Danish Psychiatric Central Research Register/The Danish National Patient Register/The Danish National Prescription Registry <sup>5</sup> /The National Registry of Alcohol Treatment/The Registry of Drug Abusers Undergoing Treatment	ICD-8; ICD-10; ATC	The Danish Health Data Authority
	No alcohol or drug use disorder	1969-2020 (Feb 27)			
<b>Supported psychiatric housing facility</b>					
	Residing in a supported psychiatric housing facility	2018-2020	Postal address*	the Act of Social Services §107/108	Statistics Denmark
	Not residing in a supported psychiatric housing facility	2018-2020			
<b>Psychiatric admission</b>					
	Psychiatric admission	2019	The Danish National Patient Register <sup>6</sup>		The Danish Health Data Authority
	No psychiatric admission	2019			
<b>Severe mental illness</b>					
	Any mental diagnosis prior to study start	1969-2020 (Feb 27)	The Danish Psychiatric Central Research <sup>7</sup> Register/The Danish National Patient Register <sup>6</sup>	ICD-8; ICD-10	The Danish Health Data Authority
	No mental diagnosis prior to study start	1969-2020 (Feb 27)			
<b>Chronic medical conditions</b>					
	Any chronic medical condition	1977-2020 (Feb 27)	The Danish National Patient Register/ the Danish National Prescription Registry		The Danish Health Data Authority
	No chronic medical condition	1977-2020 (Feb 27)			

Supplementary population groups	Definition	Years	Data sources	Type of accommodation (§)/Diagnosis and drug coding system	Data authority
<b>Crisis shelter stay</b>	Any experience of residing/staying in a crisis shelter	2018-2020	Postal address*; Register information on crisis shelter stays	the Act of Social Services §109	Statistics Denmark
	No experience of residing/staying in a crisis shelter	2018-2020			
<b>Alcohol use disorder</b>	Any alcohol use disorder	1996-2020 (Feb 27)	The Danish Psychiatric Central Research Register/The Danish National Patient Register/The Danish National Prescription Registry/The National Registry of Alcohol Treatment/The Registry of Drug Abusers Undergoing Treatment	ICD-8; ICD-10; ATC	The Danish Health Data Authority
	No alcohol use disorder				
<b>Drug use disorder</b>	Any drug use disorder	1996-2020 (Feb 27)	The Danish Psychiatric Central Research Register/The Danish National Patient Register/The Danish National Prescription Registry/The National Registry of Alcohol Treatment/The Registry of Drug Abusers Undergoing Treatment	ICD-8; ICD-10; ATC	The Danish Health Data Authority
	No drug use disorder				
<b>Mental disorder</b>	Any mental diagnosis prior to study start	1969-2020 (Feb 27)	The Danish Psychiatric Central Research <sup>7</sup> Register/The Danish National Patient Register <sup>6</sup>	ICD-8; ICD-10	The Danish Health Data Authority
	No mental diagnosis prior to study start	1969-2020 (Feb 27)			
*Having a postal address during 2018-2020 was defined as the period from Jan 1, 2018 and until Nov 11, 2020 (latest update). The addresses from the “Tilbudsportalen” <sup>8</sup> were validated by corresponding street codes in Denmark. <sup>9</sup>					
<b>Supplementary table 1: Definitions of population groups with data sources</b>					

<b>Disease group</b>	<b>Coding definition</b>	<b>ICD-10 (Diagnosis time frame)</b>	<b>ICD-8</b>	<b>Drug codes (ATC) (Time frame for prescriptions)</b>
<b>Mental disorder</b>	Diagnosis	F00, F20-F99	290-315 (excl. 291.x9, 303.x9, 303.20, 303.28, 303.90, 571.00, 571.01, 294.39, 304.x9)	
<b>Any severe mental illness</b>	Diagnosis	F20, F30-31, F32-33	295.09, 295.19, 295.29, 295.39, 295.49, 295.59, 295.69, 295.89, 295.99, 296.19, 296.39, 298.19, 296.09, 296.29, 298.09, 300.49	
<b>Any substance abuse</b>	Diagnosis AND/OR prescriptions AND/OR self-report	F10-F19	291.x9, 303.x9, 303.20, 303.28, 303.90, 571.00, 571.01, 294.39, 304.x9	N07BB (alcohol dependence), N07BC (opioids dependence)
Alcohol use disorder	Diagnosis AND/OR prescriptions AND/OR self-report	F10	291.x9, 303.x9, 303.20, 303.28, 303.90, 571.00, 571.01	N07BB (alcohol dependence)
Drug use disorder	Diagnosis AND/OR prescriptions for opioids AND/OR self-report	F11-F19	294.39, 304.x9	N07BC (opioids dependence)
*Diagnoses are defined primarily according to the study of Momen et al. 2020, <sup>10</sup> but with addition of some ATC-codes for the substance use disorders.				
<b>Supplementary table 2: Definitions of psychiatric disorders based on ICD-10, ICD-8, and ATC-codes*</b>				

Category	Disease group	Coding definition	ICD-10 Codes	Drug codes (ATC) (Time frame for prescriptions)
<b>Any chronic medical condition*</b>				
<b>Circulatory system</b>				
	Hypertension	Diagnosis AND/OR prescriptions of antihypertensives <sup>†</sup>	I10-I13, I15	C02, C03, C04, C07, C08, C09 (Twice in 1 year)
	Dyslipidemia	Diagnosis AND/OR prescription of lipid-lowering drugs <sup>‡</sup>	E78	C10 (Twice in 1 year)
	Ischemic heart disease	Diagnosis AND/OR prescription for antianginal drug	I20-I25	C01DA (Twice in 1 year)
	Atrial fibrillation	Diagnosis	I48	
	Heart failure	Diagnosis	I50	
	Peripheral artery occlusive disease	Diagnosis	I70-I74	
	Stroke	Diagnosis	I60-I64, I69	
<b>Endocrine system</b>				
	Diabetes mellitus	Diagnosis AND/OR prescription of antidiabetics	E10-E14	A10A, A10B (Twice in 1 year)
	Thyroid disorder	Diagnosis AND/OR prescription of thyroid therapy drugs	E00-E05, E061-E069, E07	H03 (Twice in 1 year)
	Gout	Diagnosis	E79, M10	
<b>Pulmonary system and allergy</b>				
	Chronic pulmonary disease	Diagnosis AND/OR Prescription for obstructive airway disease drugs	J40-J47	R03 (Twice in 1 year)
	Allergy	Diagnosis AND/OR prescription for non-sedative antihistamines AND/OR nasal antiallergics	J30.1-J30.4, L23, L50.0, T78.0, T78.2, T78.4	R06AX, R06AE07, R06AE09, R01AC, R01AD (Twice in 1 year)
<b>Gastrointestinal system</b>				
	Ulcer/chronic gastritis	Diagnosis	K221, K25-K28, K293-K295	
	Chronic liver disease	Diagnosis	B16-B19, K70, K74, K766, I85	
	Inflammatory bowel disease	Diagnosis	K50-K51	
	Diverticular disease of intestine	Diagnosis	K57	
<b>Urogenital system</b>				
	Chronic kidney disease	Diagnosis	N03, N11, N18-N19 (ever)	
	Prostate disorders	Diagnosis AND/OR prescription of prostate hyperplasia therapy drugs	N40	C02CA, G04C (Twice in 1 year)
<b>Musculoskeletal system</b>				
	Connective tissue disorders		M05-M06, M08-M09, M30-M36, D86 (ever)	
	Osteoporosis	Diagnosis AND/OR prescriptions for osteoporosis drugs	M80-M82 (ever)	M05B, G03XC01, H05AA (Twice in 1 year)
	Painful condition	Repeated prescriptions of analgesics		N02A, N02BA51, N02BE, M01A, M02A (Four times in 1 year)
<b>Hematological system</b>				
	HIV/AIDS	Diagnosis	B20-B24	
	Anemias	Diagnosis	D50-D53, D55-D59, D60-D61, D63-D64	
<b>Cancers</b>				
	Cancer	Diagnosis	C00-C43, C45-C97	
<b>Neurological system</b>				
	Vision problem	Diagnosis	H40, H25, H54 (ever)	
	Hearing problem	Diagnosis	H90-H91, H931 (ever)	
	Migraine	Diagnosis AND/OR prescription of specific anti-migraine drugs	G43	N02C (Twice in 1 year)
	Epilepsy	Diagnosis AND prescription of anti-epileptics	G40-G41	N03 (Twice in 1 year)
	Parkinson's disease	Diagnosis	G20-G22	
	Multiple sclerosis	Diagnosis	G35	

Neuropathies

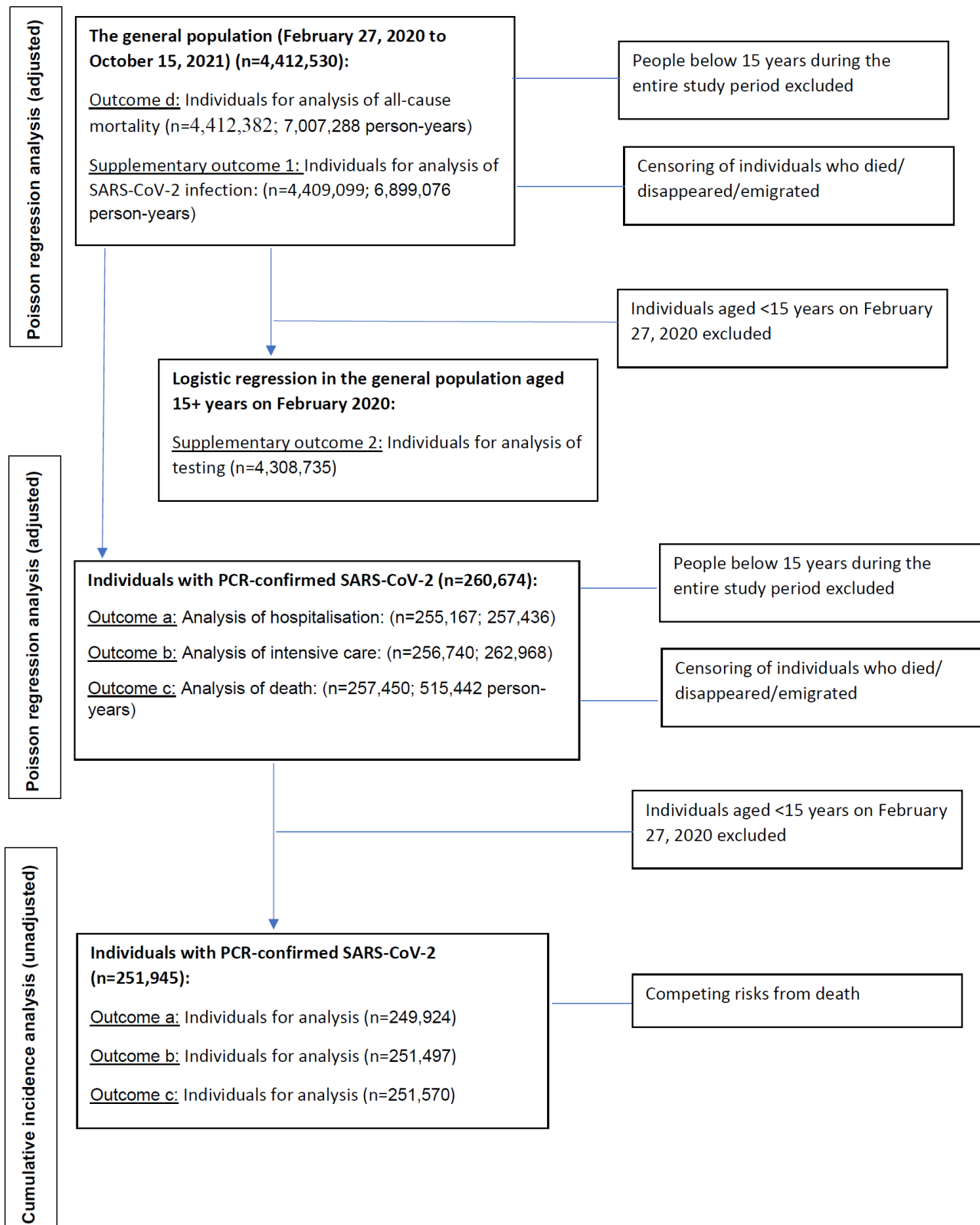
Diagnosis

G50-G64

\*The chronic medical conditions are defined primarily according to previous studies.<sup>10,11</sup> They are based on ICD-10 diagnoses since 1994 and until February 27, 2020 (study start). †Ascertained only in absence of ischemic heart disease/heart failure, and by diuretics only if no kidney disease. ‡Prescriptions used if no previous ischemic heart disease.

***Supplementary table 3: Algorithm for chronic medical health conditions***

Supplementary figure 1. Flow-chart



	<b>Hospital admission (%)</b>	<b>Individuals with SARS-CoV-2</b>	<b>CIF % Day 14</b>	<b>95% CI</b>	<b>P-value</b>
The Danish general population	11,287 (4.5)	249,924	4.5	(4.5-4.6)	
<b>Sex</b>					
Male	6094 (5.0)	122,589	5.0	(4.9-5.1)	<0.0001
Female	5193 (4.1)	127,335	4.1	(4.0-4.2)	
<b>Low educational level</b>					
Yes	3874 (5.3)	73,803	5.3	(5.1-5.4)	<0.0001
No	7413 (4.2)	176,121	4.2	(4.1-4.3)	
<b>Homelessness</b>					
Yes	31 (11.5)	269	11.6	(8.1-15.7)	<0.0001
No	11,256 (4.5)	249,655	4.5	(4.5-4.6)	
<b>Crisis shelter stay</b>					
Yes	9 (3.6)	250	3.6	(1.8-6.5)	0.50
No	11,278 (4.5)	249,674	4.5	(4.5-4.6)	
<b>Imprisonment</b>					
Yes	112 (6.0)	1882	6.0	(5.0-7.2)	0.0020
No	11,175 (4.5)	248,042	4.5	(4.5-4.6)	
<b>Substance abuse</b>					
Yes	944 (7.9)	11,893	8.0	(7.5-8.5)	<0.0001
No	10,343 (4.4)	238,031	4.4	(4.3-4.5)	
<b>Alcohol use disorder</b>					
Yes	589 (8.4)	7039	8.4	(7.8-9.1)	<0.0001
No	10,698 (4.4)	242,885	4.4	(4.4-4.5)	
<b>Drug use disorder</b>					
Yes	493 (7.9)	6283	7.9	(7.2-8.6)	<0.0001
No	10,794 (4.4)	243,641	4.5	(4.4-4.5)	
<b>Supported psychiatric housing</b>					
Yes	39 (9.4)	417	9.4	(6.8-12.5)	<0.0001
No	11,248 (4.5)	249,507	4.5	(4.5-12.5)	
<b>Psychiatric admission</b>					
Yes	100 (13.5)	739	13.6	(11.2-16.2)	<0.0001
No	11,187 (4.5)	249,185	4.5	(4.4-4.6)	
<b>Severe mental illness</b>					
Yes	1083 (10.0)	10,819	10.1	(9.5-10.7)	<0.0001
No	10,204 (4.3)	239,105	4.3	(4.2-4.4)	
<b>Mental disorder</b>					
Yes	2545 (7.8)	32,779	7.8	(7.5-8.1)	<0.0001
No	8742 (4.0)	217,145	4.1	(4.0-4.1)	
<b>Chronic medical condition</b>					
Yes	9723 (7.4)	131,846	7.4	(7.3-7.6)	<0.0001
No	1564 (1.3)	118,078	1.3	(1.3-1.4)	
CIF=cumulative incidence function					
<b>Supplementary table 4. Cumulative incidence of hospital admission 14 days after a PCR-confirmed SARS-CoV-2 infection</b>					

	Hospital admissions	Person-years	IR per 1000 person-years	(95% CI)	IRR (model 1)*	(95% CI)	P value	IRR (model 2)†	(95% CI)	P value
Total	11,232	10,057	112	(110-114)						
<b>Sex</b>										
Male	6062	4923	123	(120-126)	1.36	(1.31-1.41)	<0.0001	1.36	(1.31-1.41)	<0.0001
Female	5170	5134	101	(98-103)	1			1		
<b>Low educational level</b>										
Yes	3853	3109	1239	(1201-1279)	1.44	(1.38-1.50)	<0.0001	1.28	(1.23-1.33)	<0.0001
No	7379	6948	1062	(1038-1087)	1			1		
<b>Crisis shelter stay</b>										
Yes	9	10	893	(465-1717)	2.75	(1.43-5.30)	0.0093	1.93	(1.00-3.71)	0.076
No	11,223	10,047	1117	(1097-1138)	1			1		
<b>Homelessness</b>										
Yes	33	11	3084	(2192-4338)	4.36	(3.09-6.14)	<0.0001	3.30	(2.34-4.65)	<0.0001
No	11,199	10,046	1115	(1094-1136)	1			1		
<b>Imprisonment</b>										
Yes	113	76	1491	(1240-1792)	1.99	(1.65-2.40)	<0.0001	1.62	(1.35-1.96)	<0.0001
No	11,119	9981	1114	(1094-1135)	1			1		
<b>Substance abuse</b>										
Yes	938	454	2067	(1939-2203)	1.52	(1.42-1.62)	<0.0001	1.59	(1.49-1.70)	<0.0001
No	10,294	9603	1072	(1051-1093)	1			1		
<b>Alcohol use disorder</b>										
Yes	585	268	2183	(2013-2368)	1.46	(1.35-1.59)	<0.0001	1.59	(1.46-1.73)	<0.0001
No	10,647	9789	1088	(1067-1109)	1			1		
<b>Drug use disorder</b>										
Yes	489	240	2041	(1868-2230)	1.64	(1.49-1.79)	<0.0001	1.65	(1.50-1.80)	<0.0001
No	10,743	9817	1094	(1074-1115)	1			1		
<b>Supported psychiatric housing</b>										
Yes	39	16	2409	(1760-3297)	2.79	(2.04-3.83)	<0.0001	2.97	(2.17-4.07)	<0.0001
No	11,193	10,041	1115	(1094-1136)	1			1		
<b>Psychiatric admission</b>										
Yes	99	27	3609	(2964-4395)	1.24	(1.02-1.51)	0.041	1.29	(1.05-1.57)	0.0018
No	11,133	10,029	10,029	(1090-1131)	1			1		
<b>Severe mental illness</b>										
Yes	1073	409	2622	(2470-2784)	1.71	(1.61-1.82)	<0.0001	1.63	(1.53-1.74)	<0.0001
No	10,159	9648	1053	(1033-1074)	1			1		
<b>Mental disorder</b>										
Yes	2531	1279	1979	(1903-2057)	1.58	(1.51-1.65)	<0.0001	1.52	(1.45-1.59)	<0.0001
No	8701	8778	991	(971-1012)	1			1		
<b>Chronic medical condition</b>										
Yes	8707	4066	2142	(2097-2187)	1.97	(1.88-2.07)	<0.0001	1.92	(1.83-2.02)	<0.0001
No	2525	5991	421	(405-438)	1			1		

IR=incidence rate, IRR=incidence rate ratio  
\*Model 1 is adjusted for age (5-years age groups), calendar time (months), and sex. †Model 2 is additionally adjusted for country of origin, area of living, and vaccination status.

**Supplementary table 5: Risk of hospital admission within 14 days after a PCR-confirmed SARS-CoV-2 infection**



Population groups	Hospitalisation within 14 days			Intensive care within 14 days			Death within 60 days		
	IRR*	(95% CI)	P value	IRR*	(95% CI)	P value	MRR*	(95% CI)	P value
<b>Low educational level</b>									
Yes	1.23	(1.18-1.28)	<0.0001	1.34	(1.20-1.51)	<0.0001	1.34	(1.24-1.45)	<0.0001
No	1			1			1		
<b>Homelessness</b>									
Yes	2.09	(1.46-2.99)	0.00027	1.73	(0.66-4.55)	0.30	3.79	(1.60-8.95)	0.0099
No	1			1			1		
<b>Imprisonment</b>									
Yes	1.26	(1.04-1.52)	0.021	1.71	(1.10-2.66)	0.027	1.98	(1.22-3.21)	0.013
No	1			1			1		
<b>Substance abuse</b>									
Yes	1.37	(1.27-1.46)	<0.0001	1.24	(1.02-1.50)	0.032	1.82	(1.62-2.05)	<0.0001
No	1			1			1		
<b>Supported psychiatric housing</b>									
Yes	2.03	(1.46-2.81)	0.00013	...	...		1.63	(0.86-3.06)	0.16
No	1			...	...		1		
<b>Psychiatric admission</b>									
Yes	1.12	(0.91-1.36)	0.29	1.77	(1.02-3.07)	0.063	1.55	(1.23-1.96)	0.00052
No	1			1			1		
<b>Severe mental illness</b>									
Yes	1.43	(1.34-1.52)	<0.0001	1.30	(1.07-1.57)	0.011	1.42	(1.26-1.59)	<0.0001
No	1			1			1		
<b>Chronic medical conditions</b>									
Yes	1.85	(1.76-1.95)	<0.0001	1.76	(1.53-2.04)	<0.0001	1.54	(1.35-1.77)	<0.0001
No	1			1			1		

IRR=incidence rate ratio, MRR=mortality rate ratio  
\*Adjusted for 5-year age groups, calendar time in months, sex, country of origin, area of living, vaccination status, and all other population groups listed in the table.

**Supplementary table 6: Risk of adverse outcomes in individuals with PCR-confirmed SARS-CoV-2 infection with mutually adjustment**

	Hospital admissions	Person-years	Adjusted IRR*	(95% CI)	P value for the interaction
Total	11,232	10,057			
<b>Sex</b>					
Male	6062	4923	1.36	(1.31-1.41)	
Female	5170	5134	1		
<b>Educational level*sex</b>					
<b>Low educational level males</b>					0.71
Yes	1903	1603	1.27	(1.20-1.34)	
No	4159	3320	1		
<b>Low educational level females</b>					
Yes	1950	1506	1.29	(1.21-1.36)	
No	3220	3627	1		
<b>Homelessness*sex</b>					
<b>Homelessness in males</b>					0.076
Yes	21	7	2.72	(1.77-4.17)	
No	6041	4916	1		
<b>Homelessness in females</b>					
Yes	12	4	5.30	(3.00-9.34)	
No	5158	5130	1		
<b>Imprisonment*sex</b>					
<b>Imprisonment in males</b>					0.37
Yes	107	72	1.60	(1.32-1.93)	
No	5955	4851	1		
<b>Imprisonment in females</b>					
Yes	6	4	2.39	(1.07-5.31)	
No	5164	5130	1		
<b>Substance abuse*sex</b>					
<b>Substance abuse in males</b>					0.40
Yes	577	260	1.56	(1.43-1.70)	
No	5485	4663	1		
<b>Substance abuse in females</b>					
Yes	361	193	1.65	(1.48-1.84)	
No	4809	4940	1		
<b>Supported psychiatric housing*sex</b>					
<b>Supported psychiatric housing in males</b>					0.39
Yes	22	10	2.65	(1.74-4.03)	
No	6040	4913	1		
<b>Supported psychiatric housing in females</b>					
Yes	17	7	3.51	(2.18-5.65)	
No	5153	5127	1		
<b>Psychiatric admission*sex</b>					
<b>Psychiatric admission in males</b>					0.072
Yes	49	12	1.57	(1.18-2.08)	
No	6013	4911.5	1		
<b>Psychiatric admission in females</b>					
Yes	50	16	1.09	(0.82-1.44)	
No	5120	5118	1		
<b>Severe mental illness*sex</b>					
<b>Severe mental illness in males</b>					0.12
Yes	444	135	1.73	(1.57-1.90)	
No	5618	4788.6	1		

<b>Severe mental illness in females</b>					
Yes	629	275	1.56	(1.44-1.70)	
No	4541	4859	1		
<b>Chronic medical condition*sex</b>					
<b>Chronic medical condition in males</b>					
Yes	4608	1829	2.04	(1.92-2.17)	0.0018 <sup>†</sup>
No	1454	3094	1		
<b>Chronic medical condition in females</b>					
Yes	4099	2236	1.77	(1.65-1.90)	
No	1071	2897	1		
IRR=incidence rate ratio.					
*Adjusted for age (5-years age groups), calendar time (months), country of origin, area of living, and vaccination status. **Interaction analysis of sex*each population group. <sup>†</sup> Statistically significant interaction.					
<b>Supplementary table 7: Risk of hospital admission within 14 days after a PCR-confirmed SARS-CoV-2 infection by population group and by sex</b>					

	Admission within 14 days	Person-years	Adjusted MRR*	(95% CI)	RERI†	(95% CI)
Total	11,232	10,057				
<b>Low educational level</b>						
Male with low educational level	1903	1603	1.75	(1.65-1.85)	0.082	(-0.029-0.19)
Female with low educational level	1950	1506	1.29	(1.21-1.36)		
Male with high educational level	4159	3320	1.38	(1.32-1.44)		
Female with high educational level (reference)	3220	3627	1			
<b>Experience of homelessness</b>						
Male with experiences of homelessness	21	7	3.68	(2.40-5.66)	-1.98	(-5.36-1.42)
Female with experiences of homelessness	12	4	5.30	(3.00-9.34)		
Male with experiences of homelessness	6041	4916	1.36	(1.31-1.41)		
Female without experiences of homelessness (reference)	5158	5130	1			
<b>Experience of imprisonment</b>						
Male with experiences of imprisonment	107	72	2.15	(1.77-2.61)	-0.59	(-2.54-1.37)
Female with experiences of imprisonment	6	4	2.39	(1.07-5.31)		
Male with experiences of imprisonment	5955	4851	1.35	(1.30-1.40)		
Female without experiences of imprisonment (reference)	5164	5130	1			
<b>Substance abuse</b>						
Male with substance abuse	577	260	2.10	(1.92-2.29)	0.10	(-0.15-0.34)
Female with substance abuse	361	193	1.65	(1.48-1.84)		
Male without substance abuse	5485	4663	1.35	(1.30-1.40)		
Female without substance abuse (reference)	4809	4940	1			
<b>Supported psychiatric housing</b>						
Male with supported psychiatric housing	22	10	3.60	(2.36-5.47)	-0.27	(-2.52-1.98)
Female with supported psychiatric housing	17	7	3.51	(2.18-5.65)		
Male without supported psychiatric housing	6040	4914	1.36	(1.31-1.41)		
Female without supported psychiatric housing (reference)	5153	5127	1			
<b>Psychiatric admission</b>						
Male with psychiatric admission	49	12	2.13	(1.60-2.82)	0.69	(-0.013-1.38)
Female with psychiatric admission	50	16	1.09	(0.82-1.44)		
Male without psychiatric admission	6013	4912	1.35	(1.30-1.41)		
Female without psychiatric admission (reference)	5120	5118	1			
<b>Severe mental illness</b>						
Male with severe mental illness	444	135	2.37	(2.15-2.61)	0.44	(0.18-0.69)**
Female with severe mental illness	629	275	1.56	(1.44-1.70)		
Male without severe mental illness	5618	4789	1.37	(1.32-1.43)		
Female without severe mental illness (reference)	4541	4859	1			
<b>Chronic medical condition</b>						
Male with chronic medical condition	4608	1829	2.55	(2.38-2.74)	0.53	(0.42-0.65)**
Female with chronic medical condition	4099	2236				
Male without chronic medical condition	1454	3094	1.25	(1.16-1.35)		
Female without chronic medical condition (reference)	1071	2897	1.77	(1.65-1.90)		

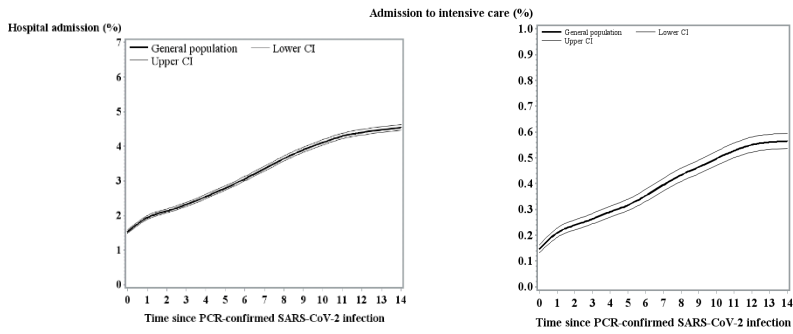
IRR=incidence rate ratio, RERI=Relative Excess Risk due to Interaction  
\*Adjusted for age (5-years age groups), calendar time (months), country of origin, area of living, and vaccination status. \*\*Statistically significant interaction.  
†RERI indicates whether the effect of the specific exposure on outcome would be greater in males than in females (reference group) with 95% CI calculated. For CIs not including 0, RERI was statistically significant.

**Supplementary table 8: Analysis of effect modification of exposures on hospitalisation by sex among people with PCR-confirmed SARS-CoV-2 infection**

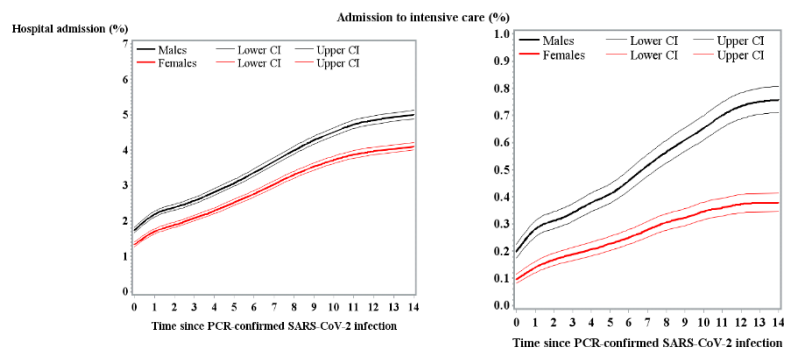
	ICU admissions (%)	Individuals with SARS-CoV-2 infection	CIF % Day 14	95% CI	P-value
The Danish general population	1413 (0.6)	251,497	0.6	(0.5-0.6)	
<b>Sex</b>					
Male	930 (0.8)	123,502	0.8	(0.7-0.8)	<0.0001
Female	483 (0.4)	127,995	0.4	(0.3-0.4)	
<b>Low educational level</b>					
Yes	493 (0.7)	74,353	0.7	(0.6-0.7)	<0.0001
No	920 (0.5)	177,144	0.5	(0.5-0.6)	
<b>History of homelessness<sup>†</sup></b>					
Yes	17 (1.1)	1583	1.1	(0.7-1.6)	0.0060
No	1396 (0.6)	249,914	0.6	(0.5-0.6)	
<b>Imprisonment</b>					
Yes	20 (1.1)	1902	1.1	(0.7-1.6)	0.0038
No	1393 (0.6)	249,595	0.6	(0.5-0.6)	
<b>Substance abuse</b>					
Yes	128 (1.1)	12,137	1.1	(0.9-1.3)	<0.0001
No	1285 (0.5)	239,360	0.5	(0.5-0.6)	
<b>Alcohol use disorder</b>					
Yes	93 (1.3)	7212	1.3	(1.1-1.6)	<0.0001
No	1320 (0.5)	244,285	0.5	(0.5-0.6)	
<b>Drug use disorder</b>					
Yes	52 (0.8)	6411	0.8	(0.6-1.1)	0.0066
No	1361 (0.6)	245,086	0.6	(0.5-0.6)	
<b>Psychiatric admission</b>					
Yes	13 (1.7)	766	1.7	(1.0-2.8)	<0.0001
No	1400 (0.6)	250,731	0.6	(0.5-0.6)	
<b>Severe mental illness</b>					
Yes	119 (1.1)	11,012	1.1	(0.9-1.3)	<0.0001
No	1294 (0.5)	240,485	0.5	(0.5-0.6)	
<b>Mental disorder</b>					
Yes	245 (0.7)	33,154	0.7	(0.7-0.8)	<0.0001
No	1168 (0.5)	218,338	0.5	(0.5-0.6)	
<b>Chronic medical condition</b>					
Yes	1265 (1.0)	133,299	1.0	(0.9-1.0)	<0.0001
No	148 (0.1)	118,198	0.1	(0.1-0.1)	
ICU=intensive care unit, CIF=cumulative incidence function					
*Results were not presented for crisis shelter and supported psychiatric housing as the cases were too few. <sup>†</sup> “History of homelessness” was used due to too few cases when restricted to “Homelessness during 2018-2020”.					
<b>Supplementary table 9: Cumulative incidence of admission to intensive care 14 days after a SARS-CoV-2 infection*</b>					

**Supplementary figure 2: Cumulative incidence of hospital admission and intensive care within 14 days after a PCR-confirmed SARS-CoV-2 infection**

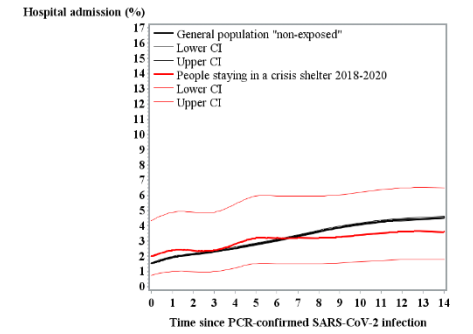
**a. Overall**



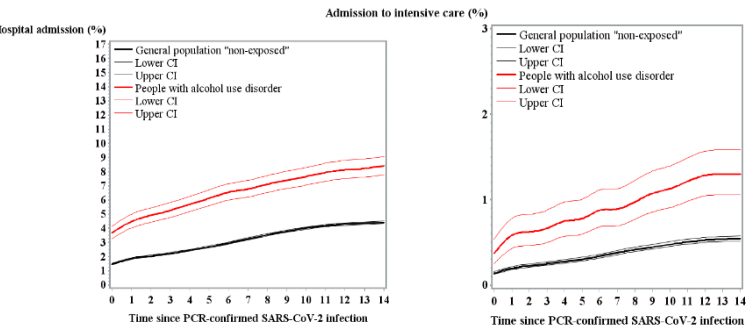
**b. Sex**



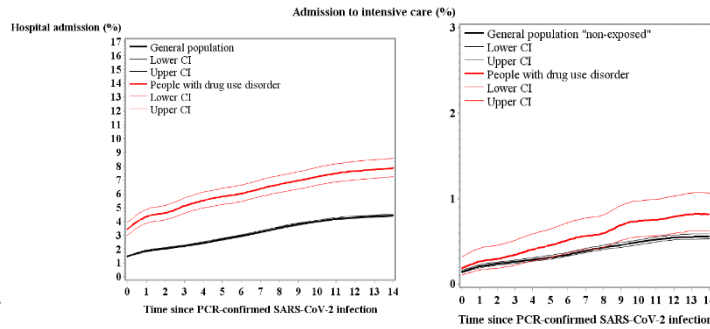
**c. Crisis shelter stay**



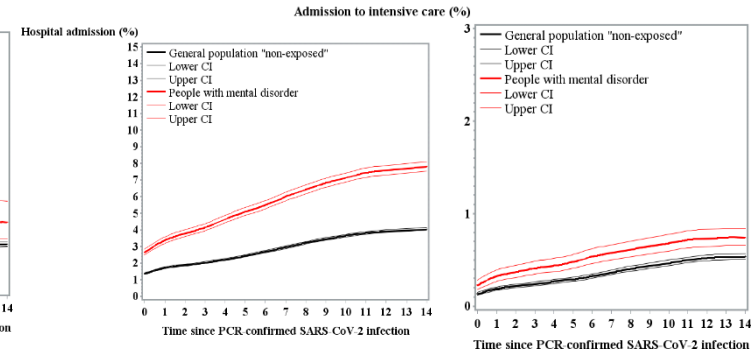
**d. Alcohol use disorder**



**e. Drug use disorder**



**f. Mental disorder**



	ICU admissions	Person-years	IR per 1000 person-years	(95% CI)	IRR (model 1) <sup>†</sup>	(95% CI)	P value	IRR (model 2) <sup>‡</sup>	(95% CI)	P value
Total	1395	10,387	134	(127-142)						
<b>Sex</b>										
Male	921	5101	181	(169-193)	1.93	(1.73-2.16)	<0.0001	1.91	(1.71-2.13)	<0.0001
Female	474	5286	90	(82-98)	1			1		
<b>Low educational level</b>										
Yes	489	3227	152	(139-166)	1.59	(1.42-1.78)	<0.0001	1.40	(1.25-1.57)	<0.0001
No	906	7160	127	(119-135)	1			1		
<b>Homelessness</b>										
Yes	5	12	413	(172-991)	3.12	(1.29-7.52)	0.033	2.37	(0.98-5.74)	0.093
No	1390	10,375	134	(127-141)	1			1		
<b>Imprisonment</b>										
Yes	21	79	265	(165-405)	2.41	(1.56-3.72)	0.00050	2.14	(1.38-3.30)	0.0022
No	1374	10,308	133	(127-141)	1			1		
<b>Substance abuse</b>										
Yes	126	488	258	(217-307)	1.32	(1.09-1.58)	0.0048	1.45	(1.21-1.75)	0.00020
No	1269	9899	128	(121-135)	1			1		
<b>Alcohol use disorder</b>										
Yes	91	290	314	(256-386)	1.46	(1.17-1.80)	0.0011	1.67	(1.34-2.07)	<0.0001
No	1304	10,097	129	(122-136)	1			1		
<b>Drug use disorder</b>										
Yes	52	258	201	(154-264)	1.11	(0.84-1.46)	0.49	1.17	(0.89-1.55)	0.28
No	1343	10,129	133	(126-140)	1			1		
<b>Psychiatric admission</b>										
Yes	13	31	416	(241-716)	1.99	(1.15-3.45)	0.027	2.06	(1.19-3.57)	0.021
No	1382	10,356	133	(127-141)	1			1		
<b>Severe mental illness</b>										
Yes	118	444	266	(222-318)	1.52	(1.26-1.84)	<0.0001	1.48	(1.22-1.79)	0.00010
No	1277	9943	128	(122-136)	1			1		
<b>Mental disorder</b>										
Yes	241	1360	177	(56-201)	1.12	(1.06-1.40)	0.0078	1.18	(1.02-1.36)	0.025
No	1154	9029	128	(121-135)	1			1		
<b>Chronic medical condition</b>										
Yes	1120	4330	259	(244-274)	1.88	(1.63-2.18)	<0.0001	1.83	(1.58-2.11)	<0.0001
No	275	6057	45	(40-51)	1			1		

ICU=intensive care unit, IR=incidence ratio, IRR=incidence rate ratio  
\*Analysis not presented for women's shelter stay and supported psychiatric housing due to too few cases. <sup>†</sup>Model 1 is adjusted for age (5-year age groups), calendar time (months), and sex. <sup>‡</sup>Model 2 is additionally adjusted for country of origin, area of living, and vaccination status.

**Supplementary table 10: Risk of intensive care within 14 days after a PCR-confirmed SARS-CoV-2 infection\***

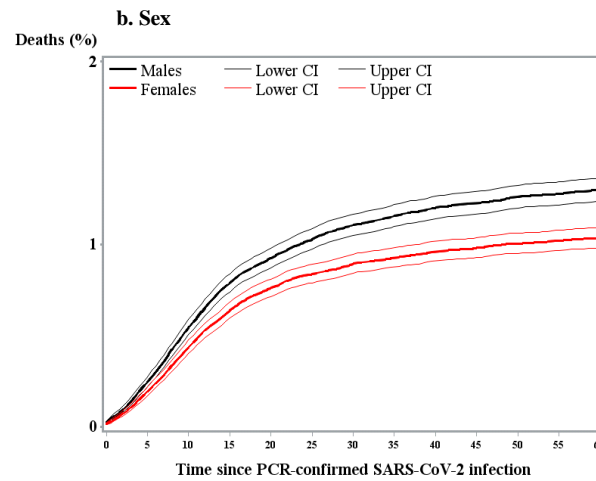
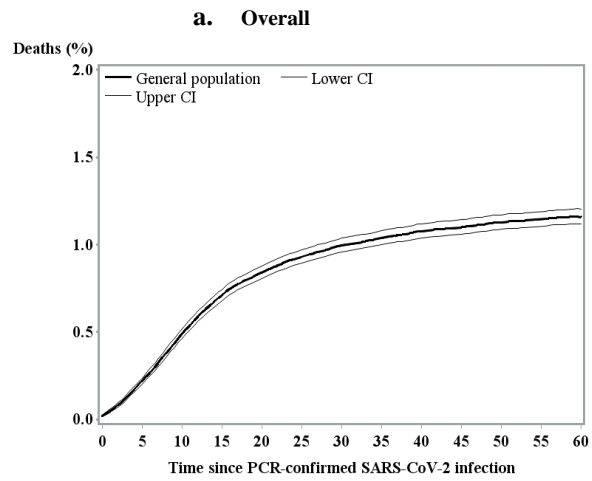
	Deaths (%)	Individuals with SARS-CoV-2 infection	CIF % Day 60	95% CI	P-value
The Danish general population	2864 (1.1)	251,570	1.2	(1.1-1.2)	
<b>Sex</b>					
Male	1569 (1.3)	123,551	1.3	(1.2-1.4)	<0.0001
Female	1295 (1.0)	128,019	1.0	(1.0-1.1)	
<b>Low educational level</b>					
Yes	1242 (1.7)	74,382	1.7	(1.6-1.8)	<00001
No	1622 (0.9)	177,188	0.9	(0.9-1.0)	
<b>Homelessness</b>					
Yes	6 (2.2)	278	2.2	(0.9-4.5)	0.11
No	2858 (1.1)	251,292	1.2	(1.1-1.2)	
<b>History of homelessness*</b>					
Yes	27 (1.7)	1585	1.8	(1.2-2.5)	0.030
No	2837 (1.1)	249,985	1.2	(1.1-1.2)	
<b>Imprisonment</b>					
Yes	17 (0.9)	1905	1.1	(0.8-1.4)	0.3
No	2847 (1.1)	249,665	1.2	(1.1-1.2)	
<b>Substance abuse</b>					
Yes	346 (2.9)	12,154	2.9	(2.6-3.2)	<0.0001
No	2518 (1.1)	239,416	1.1	(1.0-1.1)	
<b>Alcohol use disorder</b>					
Yes	242 (3.4)	7223	3.4	(3.0-3.9)	<0.0001
No	2622 (1.1)	244,347	1.1	(1.1-1.1)	
<b>Drug use disorder</b>					
Yes	152 (2.4)	6421	2.4	(2.1-2.8)	<0.0001
No	2712 (1.1)	245,149	1.1	(1.1-1.2)	
<b>Supported psychiatric housing</b>					
Yes	11 (2.6)	428	2.6	(1.4-4.5)	0.0050
No	2853 (1.1)	251,142	1.2	(1.1-1.2)	
<b>Psychiatric admission</b>					
Yes	75 (9.8)	767	9.9	(7.9-12.2)	<0.0001
No	2789 (1.1)	250,803	1.1	(1.1-1.2)	
<b>Severe mental illness</b>					
Yes	354 (3.2)	11,019	3.3	(3.0-3.6)	<0.0001
No	2510 (1.0)	240,551	1.1	(1.0-1.1)	
<b>Mental disorder</b>					
Yes	932 (2.8)	33,175	2.9	(2.7-3.0)	<0.0001
No	1932 (0.9)	218,395	0.9	(0.9-0.9)	
<b>Chronic medical condition</b>					
Yes	2796 (2.1)	133,366	2.1	(2.1-2.2)	<0.0001
No	68 (0.1)	118,204	0.1	(0.0-0.1)	

CIF=cumulative incidence function.  
\*“History of homelessness” was used in the corresponding figure (Figure 2) due to few cases when restricted to “experiencing homelessness during 2018-2020”

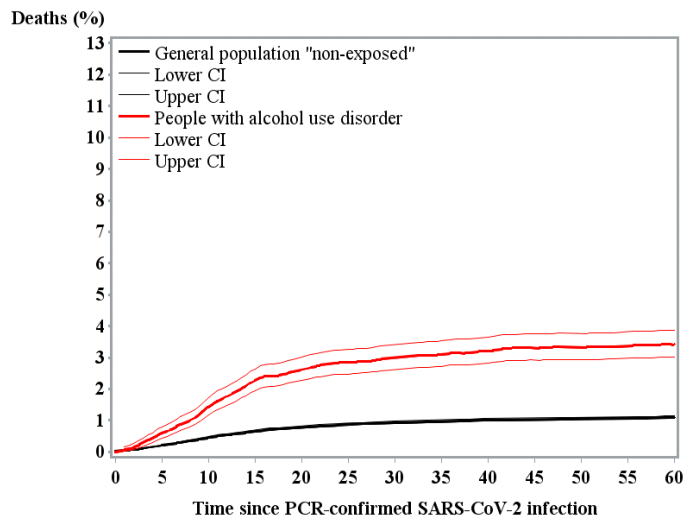
**Supplementary table 11: Cumulative incidence of death within 60 days after a PCR-confirmed SARS-CoV-2 infection**



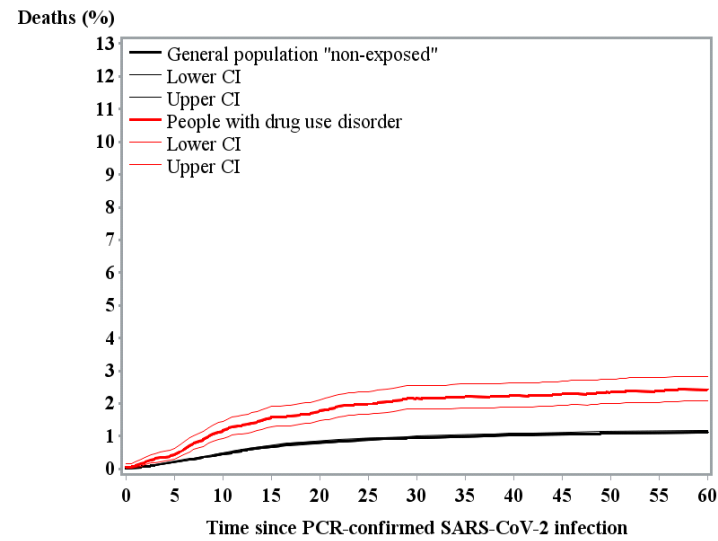
**Supplementary figure 3: Cumulative incidence of death within 60 days after a PCR-confirmed SARS-CoV-2 infection**



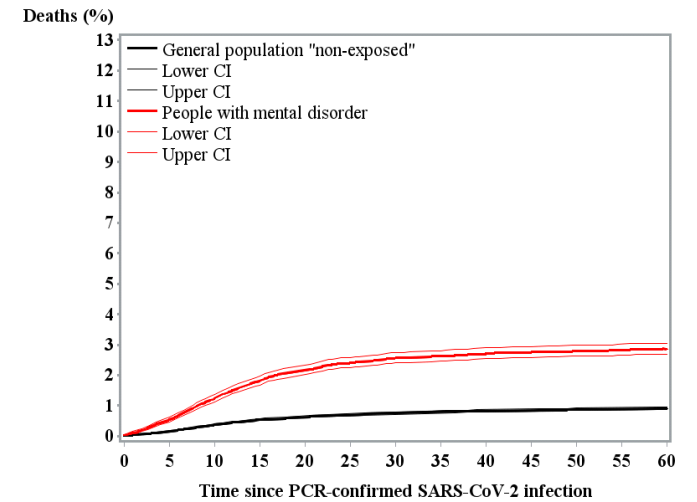
**c. Alcohol use disorder**



**d. Drug use disorder**



**e. Mental disorder**



	Deaths within 60 days	Person- years	MR per 1000 person-years	(95% CI)	MRR (model 1)*	(95% CI)	P value	MRR (model 2)†	(95% CI)	P value
<b>Total</b>	2863	40,446	71	(68-73)						
<b>Low educational level</b>										
Yes	1242	12,563	99	(94-105)	1.34	(1.24-1.45)	<0.0001	1.38	(1.27-1.49)	<0.0001
No	1621	27,883	58	(55-61)	1			1		
<b>Homelessness</b>										
Yes	6	47	128	(58-286)	8.17	(3.66-18.25)	0.00013	7.65	(3.41-17.13)	0.00019
No	2857	40,399	71	(68-73)	1			1		
<b>Imprisonment</b>										
Yes	17	306	56	(35-89)	3.12	(1.93-5.03)	<0.0001	3.08	(1.90-4.98)	0.00010
No	2846	40,140	71	(68-74)	1			1		
<b>Substance abuse</b>										
Yes	346	1873	185	(166-205)	2.10	(1.88-2.36)	<0.0001	2.05	(1.83-2.30)	<0.0001
No	2517	38,574	65	(63-68)	1			1		
<b>Alcohol use disorder</b>										
Yes	242	1114	217	(191-246)	2.20	(1.92-2.51)	<0.0001	2.13	(1.86-2.43)	<0.0001
No	2621	39,332	67	(64-69)	1			1		
<b>Drug use disorder</b>										
Yes	152	988	154	(131-180)	2.00	(1.69-2.35)	<0.0001	1.95	(1.65-2.30)	<0.0001
No	2711	39,459	69	(66-71)	1			1		
<b>Supported psychiatric housing</b>										
Yes	11	68	163	(90-294)	2.88	(1.59-5.21)	0.0029	2.50	(1.38-4.53)	0.0086
No	2852	40,379	71	(68-73)	1			1		
<b>Psychiatric admission</b>										
Yes	75	115	655	(522-821)	1.76	(1.40-2.22)	<0.0001	1.74	(1.38-2.20)	<0.0001
No	2788	40,332	69	(67-72)	1			1		
<b>Severe mental illness</b>										
Yes	354	1699	208	(188-231)	1.66	(1.49-1.86)	<0.0001	1.63	(1.46-1.83)	<0.0001
No	2509	38,747	65	(62-67)	1			1		
<b>Mental disorder</b>										
Yes	932	5219	179	(167-190)	1.93	(1.78-2.09)	<0.0001	1.91	(1.76-2.07)	<0.0001
No	1931	35,227	55	(52-57)	1			1		
<b>Chronic medical condition</b>										
Yes	2611	16,741	156	(150-162)	1.60	(1.3-1.8)	<0.0001	1.61	(1.41-1.85)	<0.0001
No	252	23,705	11	(9.4-12.0)	1			1		

MR=mortality rate, MRR=mortality rate ratio  
\*Model 1 is adjusted for age (5-years age groups), calendar time (months), and sex. †Model 2 is additionally adjusted for country of origin, area of living, and vaccination status.

**Supplementary table 12: Risk of death within 60 days after a PCR-confirmed SARS-CoV-2 infection**

	Deaths within 60 days	Person-years	Adjusted MRR*	(95% CI)	P value for the interaction**
Total	2863	40,446			
<b>Sex</b>					
Male	1568	19,892	1.77	(1.64-1.90)	
Female	1295	20,554	1		
<b>Educational level*sex</b>					
<b>Low educational level males</b>					0.37
Yes	571	6484	1.33	(1.20-1.48)	
No	997	13,409	1		
<b>Low educational level females</b>					
Yes	671	6080	1.43	(1.28-1.60)	
No	624	14,475	1		
<b>Homelessness*sex</b>					
<b>Homelessness in males†</b>					0.18
Yes	19	126	3.10	(1.97-4.90)	
No	1549	19,767	1		
<b>Homelessness in females†</b>					
Yes	8	122	5.60	(2.78-11.30)	
No	1287	20,432	1		
<b>Imprisonment*sex</b>					
<b>Imprisonment in males‡</b>					
Yes	...	...	...		
No	...	...	...		
<b>Imprisonment in females‡</b>					
Yes	...	...	...		
No	...	...	...		
<b>Substance abuse*sex</b>					0.28
<b>Substance abuse in males</b>					
Yes	234	1080	2.15	(1.87-2.47)	
No	1334	18,813	1		
<b>Substance abuse in females</b>					
Yes	112	793	1.88	(1.55-2.29)	
No	1183	19,761	1		
<b>Supported psychiatric housing*sex</b>					
<b>Supported psychiatric housing in males‡</b>					
Yes	...	...	...		
No	...	...	...		
<b>Supported psychiatric housing in females‡</b>					
Yes	...	...	...		
No	...	...	...		
<b>Psychiatric admission*sex</b>					
<b>Psychiatric admission in males</b>					0.22
Yes	38	49	2.03	(1.46-2.81)	
No	1530	19,843	1		
<b>Psychiatric admission in females</b>					
Yes	37	66	1.52	(1.09-2.11)	
No	1258	20,489	1		
<b>Severe mental illness*sex</b>					
<b>Severe mental illness in males</b>					0.075
Yes	151	572	1.84	(1.55-2.18)	
No	1417	19,320	1		

<b>Severe mental illness in females</b>					
Yes	203	1127	1.50	(1.29-1.74)	
No	1092	19,427	1		
<b>Chronic medical condition*sex</b>					
<b>Chronic medical condition in males</b>					
Yes	1425	7628	1.74	(1.46-2.08)	0.18
No	143	12,263	1		
<b>Chronic medical condition in females</b>					
Yes	1186	9113	1.46	(1.19-1.78)	
No	109	11,441	1		
MRR=mortality rate ratio					
*Adjusted for age (5-years age groups), calendar time (months), country of origin, area of living, and vaccination status. **Interaction analysis of sex*each population group. †Any history of homelessness used for the interaction analysis to have enough cases. ‡Too few cases to be presented.					
<b>Supplementary table 13: Risk of death within 60 days after a PCR-confirmed SARS-CoV-2 infection by population group and by sex</b>					

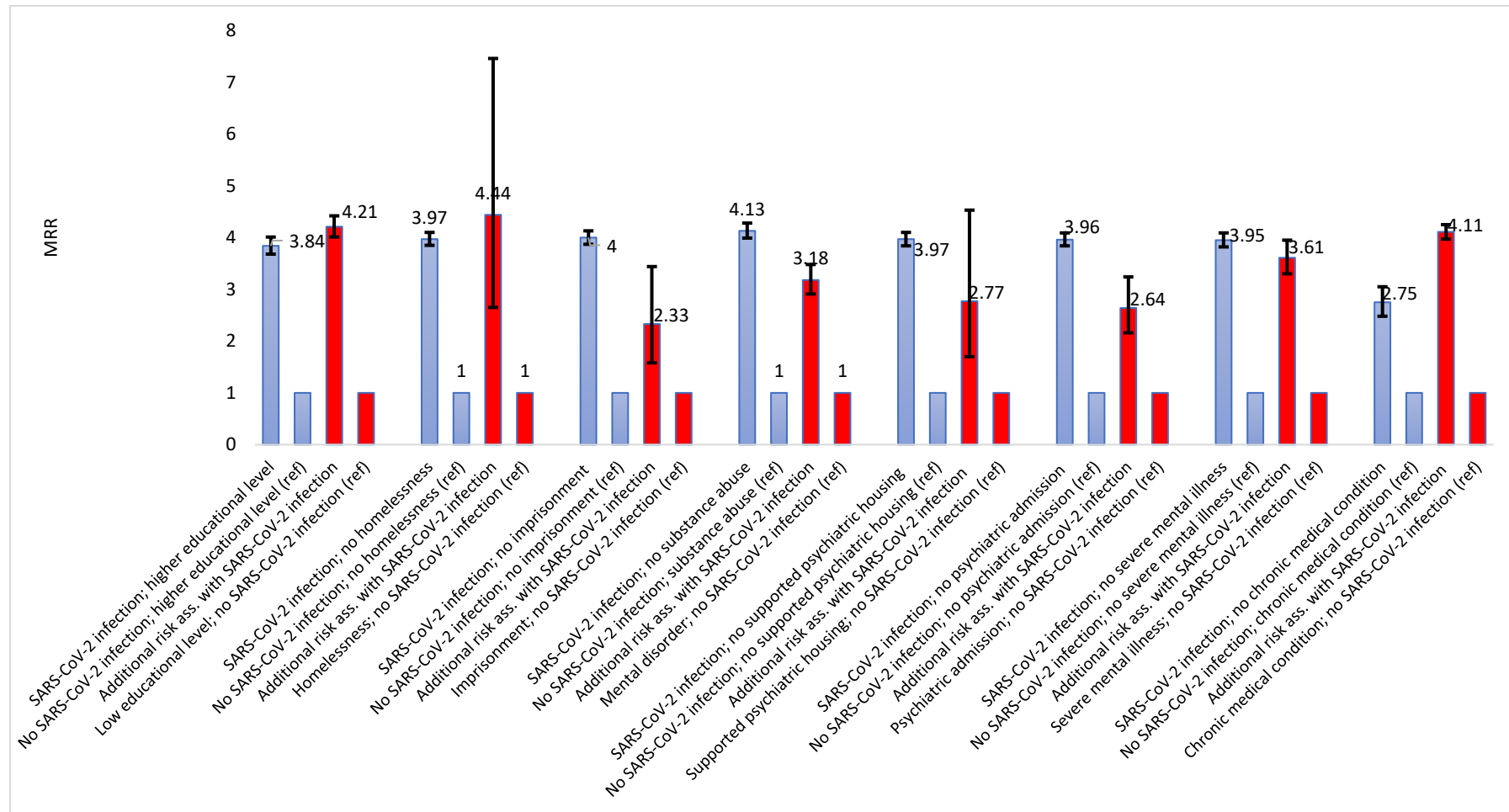
	Deaths within 60 days	Person-years	Adjusted MRR*	(95% CI)	RERI†	(95% CI)
Total	2863	40,446				
<b>Low educational level</b>						
Male with low educational level	571	6484	2.52	(2.24-2.83)	0.20	(-0.070-0.47)
Female with low educational level	671	6080	1.43	(1.28-1.60)		
Male with high educational level	997	13409	1.89	(1.71-2.09)		
Female with high educational level (reference)	624	14475	1			
<b>Experience of homelessness‡</b>						
Male with experiences of homelessness	19	126	5.47	(3.46-8.65)	-0.89	(-5.50-3.72)
Female with experiences of homelessness	8	122	5.60	(2.78-11.30)		
Male with experiences of homelessness	1549	19,767	1.76	(1.63-1.90)		
Female without experiences of homelessness (reference)	1287	20,432	1			
<b>Experience of imprisonment¶</b>						
Male with experiences of imprisonment	...	...	...			
Female with experiences of imprisonment	...	...	...			
Male with experiences of imprisonment	...	...	...			
Female without experiences of imprisonment (reference)	...	...	...			
<b>Substance abuse</b>						
Male with substance abuse	234	1080	3.65	(3.16-4.21)	1.07	(0.48-1.66)**
Female with substance abuse	112	793	1.88	(1.55-2.29)		
Male without substance abuse	1334	18,813	1.70	(1.56-1.84)		
Female without substance abuse (reference)	1183	19,761	1			
<b>Supported psychiatric housing¶</b>						
Male with supported psychiatric housing	...	...	...			
Female with supported psychiatric housing	...	...	...			
Male without supported psychiatric housing	...	...	...			
Female without supported psychiatric housing (reference)	...	...	...			
<b>Psychiatric admission</b>						
Male with psychiatric admission	38	49	3.55	(2.57-4.91)	1.28	(0.035-2.52)**
Female with psychiatric admission	37	66	1.52	(1.09-2.11)		
Male without psychiatric admission	1530	19,843	1.75	(1.62-1.89)		
Female without psychiatric admission (reference)	1258	20,489	1			
<b>Severe mental illness</b>						
Male with severe mental illness	151	572	3.26	(2.75-3.87)	0.99	(0.42-1.56)**
Female with severe mental illness	203	1127	1.50	(1.29-1.74)		
Male without severe mental illness	1417	19,320	1.77	(1.64-1.92)		
Female without severe mental illness (reference)	1092	19,427	1			
<b>Chronic medical condition</b>						
Male with chronic medical condition	1425	7628	2.62	(2.15-3.20)	0.65	(0.35-0.97)**
Female with chronic medical condition	1186	9113	1.46	(1.19-1.78)		
Male without chronic medical condition	143	12,264	1.51	(1.17-1.94)		
Female without chronic medical condition (reference)	109	11,441	1			

IRR=incidence rate ratio, RERI=Relative Excess Risk due to Interaction  
\*Adjusted for age (5-years age groups), calendar time (months), country of origin, area of living, and vaccination status. \*\*Statistically significant interaction.  
†RERI indicates whether the effect of the specific exposure on outcome would be greater in males than in females (reference group) with 95% CI calculated.  
For CIs not including 0, RERI was statistically significant. ‡"History of homelessness" was used due to too few cases when restricted to "Homelessness during 2018-2020". ¶Too few cases in some strata to present the results.

**Supplementary table 14. Analysis of effect modification of exposures on death by sex among people with PCR-confirmed SARS-CoV-2 infection**

	Deaths	Person-years	MRR (model 1)*	(95% CI)	P value	MRR (model 2)†	(95% CI)	P value
Total	82,171	7,007,288						
<b>Low educational level</b>								
Both	1706	51,086	5.72	(5.45-6.01)	<0.0001	5.72	(5.45-6.01)	<0.0001
Only low educational level	34,649	1,911,233	1.36	(1.34-1.38)		1.37	(1.34-1.39)	
Only PCR-confirmed SARS-CoV-2 infection	2302	121,404	3.84	(3.68-4.01)		3.81	(3.65-3.97)	
None	43,514	4,923,566	1			1		
<b>Experience of homelessness and SARS-CoV-2 infection</b>								
Both	15	183	39.21	(23.63-65.06)	<0.0001	41.24	(24.84-68.44)	<0.0001
Only homelessness	298	10,514	8.82	(7.87-9.89)		8.85	(7.90-9.92)	
Only PCR-confirmed SARS-CoV-2 infection	3993	172,306	3.97	(3.85-4.10)		3.97	(3.85-4.11)	
None	77,865	6,824,284	1			1		
<b>Experience of imprisonment and SARS-CoV-2 infection</b>								
Both	26	1187	9.44	(6.43-13.88)	<0.0001	9.66	(6.57-14.20)	<0.0001
Only imprisonment	855	58433	4.05	(3.78-4.34)		4.03	(3.77-4.32)	
Only PCR-confirmed SARS-CoV-2 infection	3982	171302	4.00	(3.87-4.13)		4.00	(3.87-4.13)	
None	77308	6776366	1			1		
<b>Substance abuse and SARS-CoV-2 infection</b>								
Both	512	7831	10.43	(9.56-11.38)	<0.0001	10.55	(9.67-11.51)	<0.0001
Only pre-existing substance abuse	12,685	490,288	3.27	(3.21-3.34)		3.28	(3.22-3.35)	
Only PCR-confirmed SARS-CoV-2 infection	3496	164659	4.13	(3.99-4.28)		4.16	(4.02-4.31)	
None	65478	6344511	1			1		
<b>Supported psychiatric housing and SARS-CoV-2 infection</b>								
Both	17	296	12.14	(7.54-19.52)	<0.0001	11.95	(7.42-19.22)	<0.0001
Only supported psychiatric housing	250	14,495	4.37	(3.86-4.95)		4.40	(3.89-4.99)	
Only PCR-confirmed SARS-CoV-2 infection	3991	172,193	3.97	(3.84-4.10)		3.97	(3.84-4.10)	
None	77,913	6,820,304	1			1		
<b>Psychiatric admission and SARS-CoV-2 infection</b>								
Both	100	473	8.71	(7.16-10.60)	<0.0001	8.65	(7.11-10.53)	<0.0001
Only psychiatric admission	1623	21,061	3.29	(3.14-3.46)		3.30	(3.14-3.46)	
Only PCR-confirmed SARS-CoV-2 infection	3908	172,016	3.96	(3.84-4.09)		3.96	(3.83-4.09)	
None	76,540	6,813,738	1			1		
<b>Severe mental illness and SARS-CoV-2 infection</b>								
Both	515	7340	7.77	(7.12-8.48)	<0.0001	7.82	(7.16-8.53)	<0.0001
Only pre-existing mental disorder	8762	368,407	2.15	(2.10-2.20)		2.15	(2.11-2.20)	
Only PCR-confirmed SARS-CoV-2 infection	3493	165,150	3.95	(3.82-4.09)		3.96	(3.82-4.10)	
None	69,401	6,466,391	1			1		
<b>Chronic medical condition and SARS-CoV-2 infection</b>								
Both	3630	74,014	7.19	(6.91-7.48)	<0.0001	7.23	(6.95-7.52)	<0.0001
Only chronic medical condition	69,210	3,454,313	1.75	(1.71-1.79)		1.76	(1.72-1.80)	
Only PCR-confirmed SARS-CoV-2 infection	378	98,476	2.75	(2.48-3.05)		2.73	(2.46-3.03)	
None	8953	3,380,486	1			1		
MRR=mortality rate ratio								
*Model 1 is adjusted for age (5-years age groups), calendar time (months), and sex. †Model 2 is additionally adjusted for country of origin, area of living, and vaccination status.								
<b>Supplementary table 15: Risk of death during the entire study period</b>								

**Supplementary figure 4: Risk of all-cause mortality associated with a PCR-confirmed SARS-CoV-2 infection in the population groups and their comparison groups\***



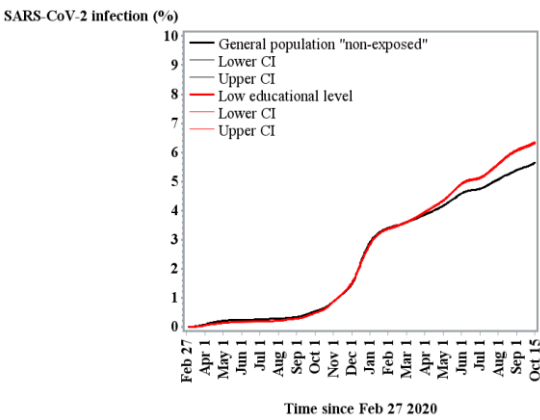
\*Estimates are adjusted for 5-years age groups, month, and sex. P-values <0.0001 and <0.05 after adjusting for multiple testing with Bonferroni. Additional risk associated with SARS-CoV-2 infection refers to the extra relative risk that multiplied with the pre-existing excess risk of death in the selected population groups (second bar for each predictor in figure 3) gives the overall combined excess risk of death (first bar for each predictor in figure 3) during the study period.

	<b>SARS-CoV-2 infections (%)</b>	<b>Individuals for analysis</b>	<b>CIF % (Oct 15, 2021)</b>	<b>95% CI</b>	<b>P-value</b>
The Danish general population	251,569 (5.8)	4,308,735	5.8	(5.8-5.9)	
<b>Sex</b>					
Male	123,551 (5.8)	2,126,574	5.8	(5.8-5.8)	0.0084
Female	128,018 (5.9)	2,182,161	5.9	(5.8-5.9)	
<b>Low educational level</b>					
Yes	74,382 (6.3)	1,173,496	6.3	(6.3-6.4)	<0.0001
No	177,187 (5.7)	3,135,239	5.7	(5.6-5.7)	
<b>Experiences of homelessness</b>					
Yes	278 (4.4)	6375	4.4	(3.9-4.9)	<0.0001
No	251,291 (5.8)	4,302,360	5.8	(5.8-5.9)	
<b>Crisis shelter use</b>					
Yes	250 (9.5)	2638	5.9	(8.4-10.6)	<0.0001
No	251,319 (5.8)	4,306,097	5.8	(5.8-5.9)	
<b>Imprisonment</b>					
Yes	1905 (5.3)	36,271	5.3	(5.0-5.5)	<0.0001
No	249,664 (5.8)	4,272,464	5.8	(5.98-5.9)	
<b>Supported psychiatric housing</b>					
Yes	428 (4.7)	9142	4.7	(4.3-5.1)	<0.0001
No	251,141 (5.8)	4,299,593	5.8	(5.8-5.9)	
<b>Psychiatric admission</b>					
Yes	767 (5.4)	14,113	5.3	(5.3-5.4)	0.042
No	250,802 (5.8)	4,294,622	5.8	(5.8-5.9)	
<b>Severe mental illness</b>					
Yes	11,019 (4.7)	235,241	4.7	(4.6-4.8)	<0.0001
No	240,550 (5.9)	4,073,494	5.9	(5.9-5.9)	
<b>Substance abuse</b>					
Yes	12,154 (3.9)	312,525	3.9	(3.8-4.0)	<0.0001
No	239,415 (5.9)	3,996,210	6.0	(6.0-6.0)	
<b>Alcohol use disorder</b>					
Yes	7223 (3.7)	194,350	3.7	(3.6-3.8)	<0.0001
No	244,346 (5.9)	4,114,385	5.9	(5.9-6.0)	
<b>Drug use disorder</b>					
Yes	6421 (3.8)	170,047	3.8	(3.7-3.9)	<0.0001
No	245,148 (5.9)	4,138,688	5.9	(5.9-5.9)	
<b>Mental disorder</b>					
Yes	33,175 (5.3)	623,138	5.3	(5.3-5.4)	<0.0001
No	218,394 (5.9)	3,685,597	5.9	(5.9-5.9)	
<b>Chronic medical condition</b>					
Yes	133,366 (5.0)	2,670,334	5.0	(5.0-5.0)	<0.0001
No	118,203 (7.2)	1,368,401	7.2	(7.2-7.3)	
CIF=cumulative incidence function					
<b>Supplementary table 16: Cumulative incidence of a PCR-confirmed SARS-CoV-2 infection</b>					

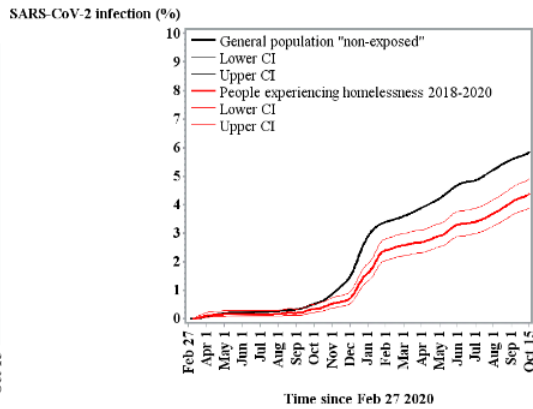


**Supplementary figure 5a: Cumulative incidence of PCR-confirmed SARS-CoV-2 infection**

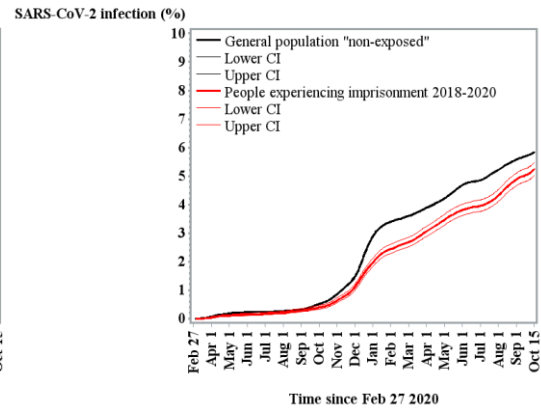
**a. Low educational level**



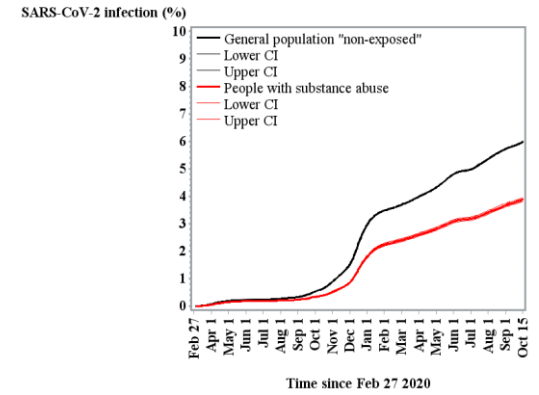
**b. Homelessness**



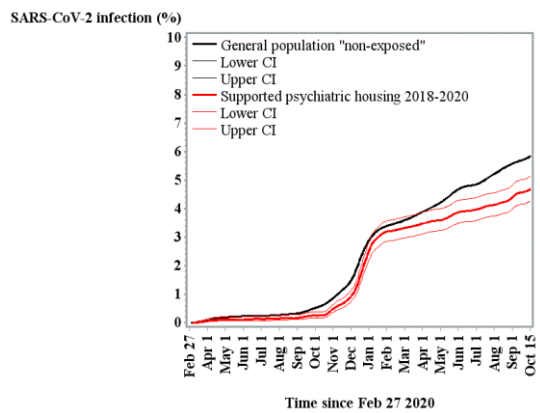
**c. Imprisonment**



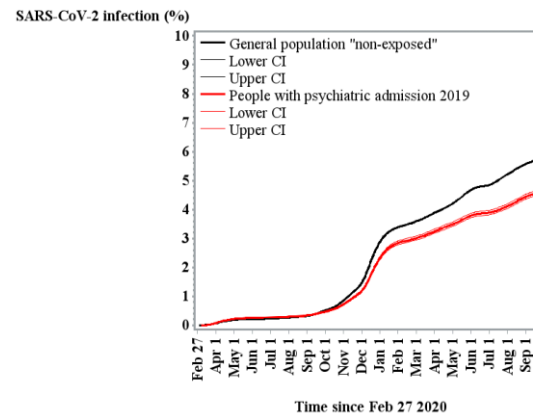
**d. Substance abuse**



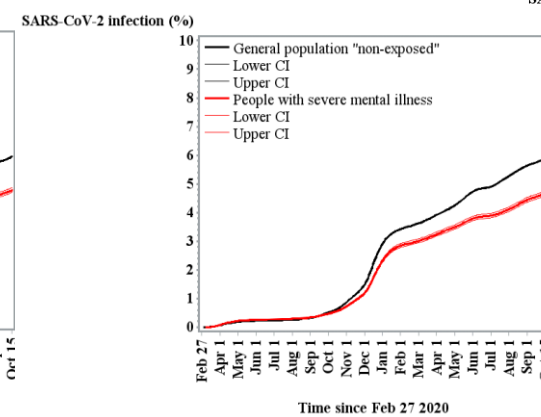
**e. Supported psychiatric housing**



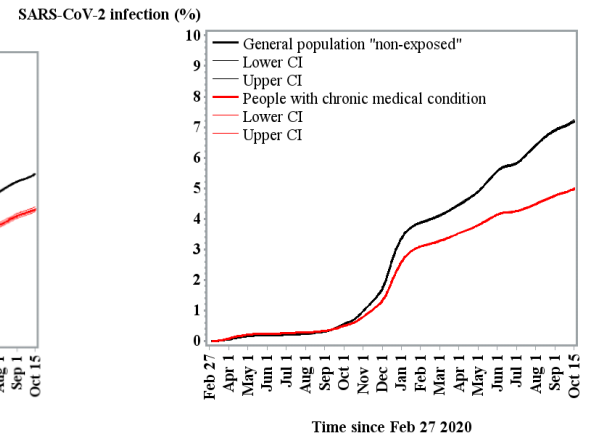
**f. Psychiatric admission**



**g. Severe mental illness**

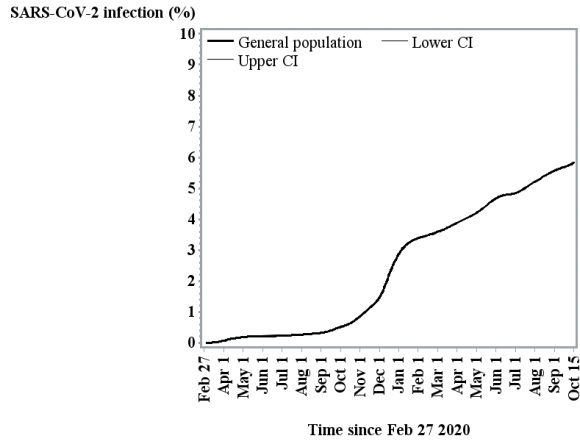


**h. Chronic medical condition**

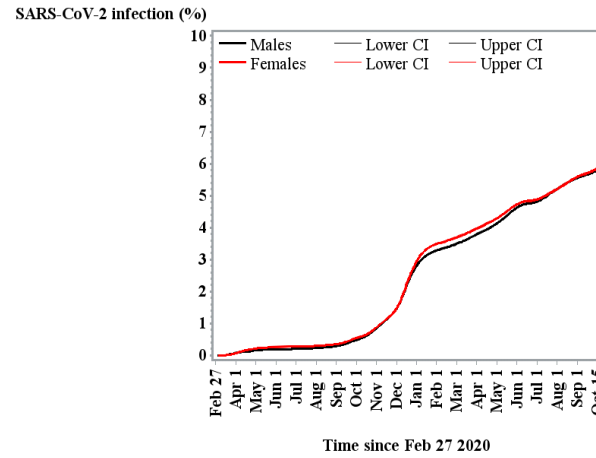


**Supplementary figure 5b: Cumulative incidence of PCR-confirmed SARS-CoV-2 infection**

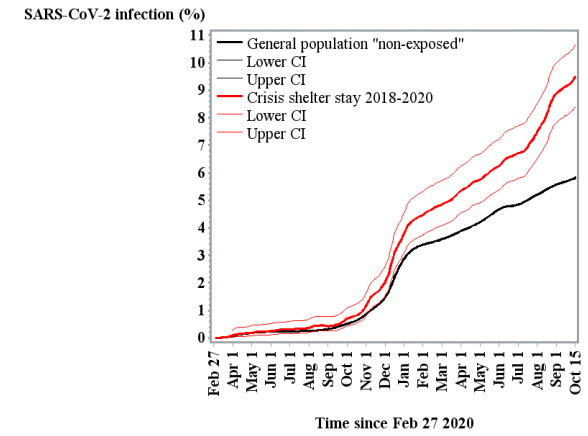
**a. Overall**



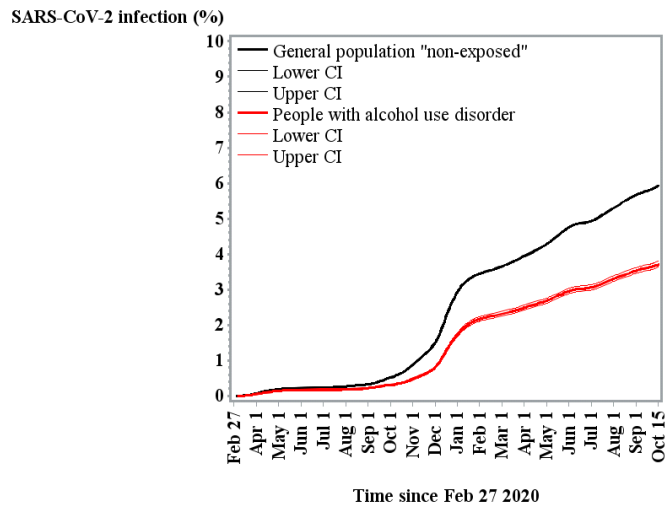
**b. Sex**



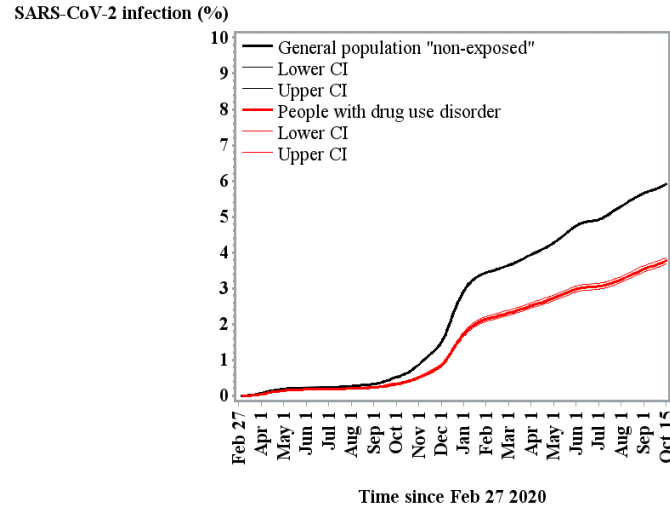
**c. Crisis shelter**



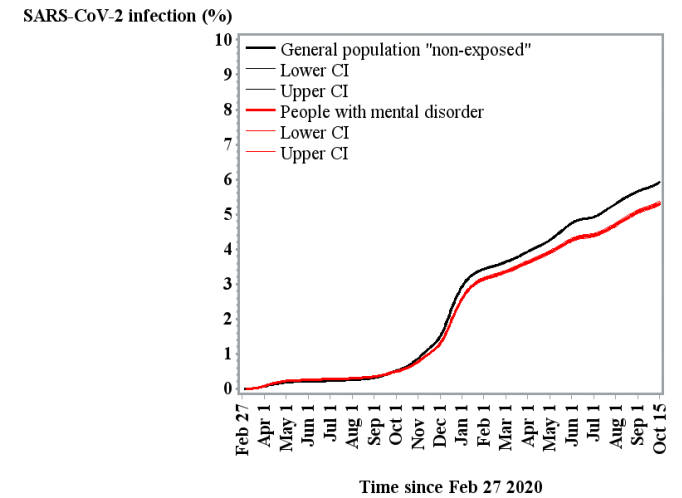
**d. Alcohol use disorder**



**e. Drug use disorder**



**f. Any mental disorder**



	<b>SARS-CoV-2 infections</b>	<b>IRR*</b>	<b>(95% CI)</b>	<b>P value</b>
<b>Overall</b>	256,998/6,899,076 person-years			
<b>Low educational level</b>				
Yes	79,683/1,939,879	0.99	(0.98-1.00)	0.11
No	177,315/4,959,197	1		
<b>Homelessness</b>				
Yes	268/10,423	0.61	(0.54-0.69)	<0.0001
No	256,730/6,888,653	1		
<b>Crisis shelter use</b>				
Yes	257/4238	1.21	(1.07-1.37)	0.0034
No	256,741/6,894,838	1		
<b>Imprisonment</b>				
Yes	1989	0.84	(0.80-0.88)	<0.0001
No	255,009/6,839,942	1		
<b>Substance abuse</b>				
Yes	12,159/500,900	0.69	(0.67-0.70)	<0.0001
No	244,839/6,398,176	1		
<b>Alcohol use disorder</b>				
Yes	7224/311,682	0.67	(0.66-0.69)	<0.0001
No	249,774/6,587,394	1		
<b>Drug use disorder</b>				
Yes	6425/272696	0.65	(0.64-0.67)	<0.0001
No	250573/6626380	1		
<b>Supported psychiatric housing</b>				
Yes	439/14709	0.59	(0.54-0.65)	<0.0001
No	256,559/6,884,367	1		
<b>Psychiatric admission</b>				
Yes	776/22,628	0.94	(0.88-1.01)	0.084
No	256,222/6,876,448	1		
<b>Severe mental illness</b>				
Yes	11,037/375,786	0.83	(0.81-0.84)	<0.0001
No	245,961/6,523,290	1		
<b>Mental disorder</b>				
Yes	33,643/1,000,605	0.84	(0.83-0.85)	<0.0001
No	223,355/5,898,471	1		
<b>Chronic medical condition</b>				
Yes	107,589/3,511,354	1.04	(1.03-1.05)	<0.0001
No	149,409/3,387,721	1		
IRR=incidence rate ratio				
*Adjusted for age (5-years age groups), calendar time (months), and sex.				
<b>Supplementary table 17: Risk of a PCR-confirmed SARS-CoV-2 infection in the Danish general population</b>				

	<b>Numbers</b>	<b>Individuals</b>	<b>OR*</b>	<b>(95% CI)</b>	<b>P value</b>
	3,634,074	4,308,735			
<b>Low educational level</b>					
Yes	939,575	1,173,496	0.64	(0.64-0.64)	<0.0001
No	2,694,499	3,135,239	1		
<b>Homelessness</b>					
Yes	4922	6375	0.48	(0.46-0.51)	<0.0001
No	3,629,152	4,302,360	1		
<b>Crisis shelter</b>					
Yes	2403	2638	0.96	(0.84-1.10)	0.54
No	3,631,671	4,306,097	1		
<b>Imprisonment</b>					
Yes	27,487	36,271	0.47	(0.46-0.48)	<0.0001
No	3,606,587	4,272,464	1		
<b>Substance abuse</b>					
Yes	254,763	312,525	0.82	(0.81-0.83)	<0.0001
No	3,379,311	3,996,210	1		
<b>Alcohol use disorder</b>					
Yes	155,988	194,350	0.78	(0.77-0.79)	<0.0001
No	3,478,086	4,114,385	1		
<b>Drug use disorder</b>					
Yes	139,967	170,047	0.82	(0.81-0.83)	<0.0001
No	3,494,107	4,138,688	1		
<b>Supported psychiatric housing</b>					
Yes	7577	9142	0.63	(0.60-0.67)	<0.0001
No	3,626,497	4,299,593	1		
<b>Psychiatric admission</b>					
Yes	11,560	14,113	1.07	(1.02-1.12)	0.0047
No	3,622,514	4,294,622	1		
<b>Severe mental disorder</b>					
Yes	193046	235241	0.83	(0.82-0.84)	<0.0001
No	3,441,028	4,073,494	1		
<b>Mental disorder</b>					
Yes	518,843	623,138	0.84	(0.83-0.84)	<0.0001
No	3,115,231	3,685,597	1		
<b>Chronic medical condition</b>					
Yes	2,212,176	2,670,334	1.55	(1.54-1.56)	<0.0001
No	1,421,898	1,638,401	1		
OR=odds ratio					
*Adjusted for 5-years age groups and sex.					
<b>Supplementary table 18: Odds for having any PCR-test for SARS-CoV-2 infection during the study period</b>					

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