Dynamic CO-CIN report to SAGE and NERVTAG

[OFFICIAL-SENSITIVE PROTECT]

Dynamic content updated: 2020-04-15 16:21:51.

Executive summary

The COVID-19 Clinical Information Network (CO-CIN) collated clinical information from the usual health care records of people of all ages admitted to hospital in the UK.

Up to 10th March people with positive swabs were admitted to hospital as part of the containment strategy. Since 10th March, admission is mostly based upon need for treatment of COVID-19 disease. The great majority of cases in the community do not require hospital admission.

In total up until 15 April 2020, CO-CIN has recruited **14799 patients** with confirmed Coronavirus (Figure 1).

The CO-CIN dataset represents 15% (14799/98,476) of cases of confirmed Coronovirus cases in the UK, per the PHE daily reports (last updated 9am on 15 April).

Patient data is collected and uploaded from start of admission, however a complete patient data set is not available until the episode of care is complete. This causes a predictable lag in available data influenced by the duration of admission which is greatest for the sickest patients.

The geographical location of our patients can be seen in Figure 2, of these 597 had travelled abroad recently, and 2407 reported visiting or working in a hospital where COVID-19 cases are being managed.

The median age is 72 (range: 0-104), Male/Female 6697/4406.

The most common symptoms were cough (70%), fever (69%) and shortness of breath (65%) (Figure 3A). 405/9778 (4%) of patients have reported no symptoms. Comorbidity can be seen in Figure 3B. The most common comorbidities were chronic cardiac disease (28%), diabetes (without complications) (19%) and chronic pulmonary disease (17%). 2344/9874 (24%) of patients have reported no co morbidity. 47/843 (6%) of women were recorded as being pregnant.

For patients not already in hospital, the median time from onset of symptoms to presentation at hospital was 5 days (range: 0 - 3653 days).

The median length of hospital stay was 6 days (range: 1-163, n = 5056).
768/5717 (13%) patients required high-flow oxygen after day 1 of treatment.

Currently 2105 patient(s) have died and 1620 required ICU. 3069 have been discharged home.

Interpretation: The dataset is increasingly more representative of the burden of disease requiring hospitalisation and captures the early exponential rise of disease incidence that is now increasingly driven by domestic transmission events in the community.

Furthermore, we can now see ‘hot spots’ of disease incidence that largely reflect areas of high population density (most notably London) with a few exceptions to this. There are more men than women, consistent with reports from other countries. The proportion of pregnant women affected is broadly in line with the proportion of pregnant women in the general population.

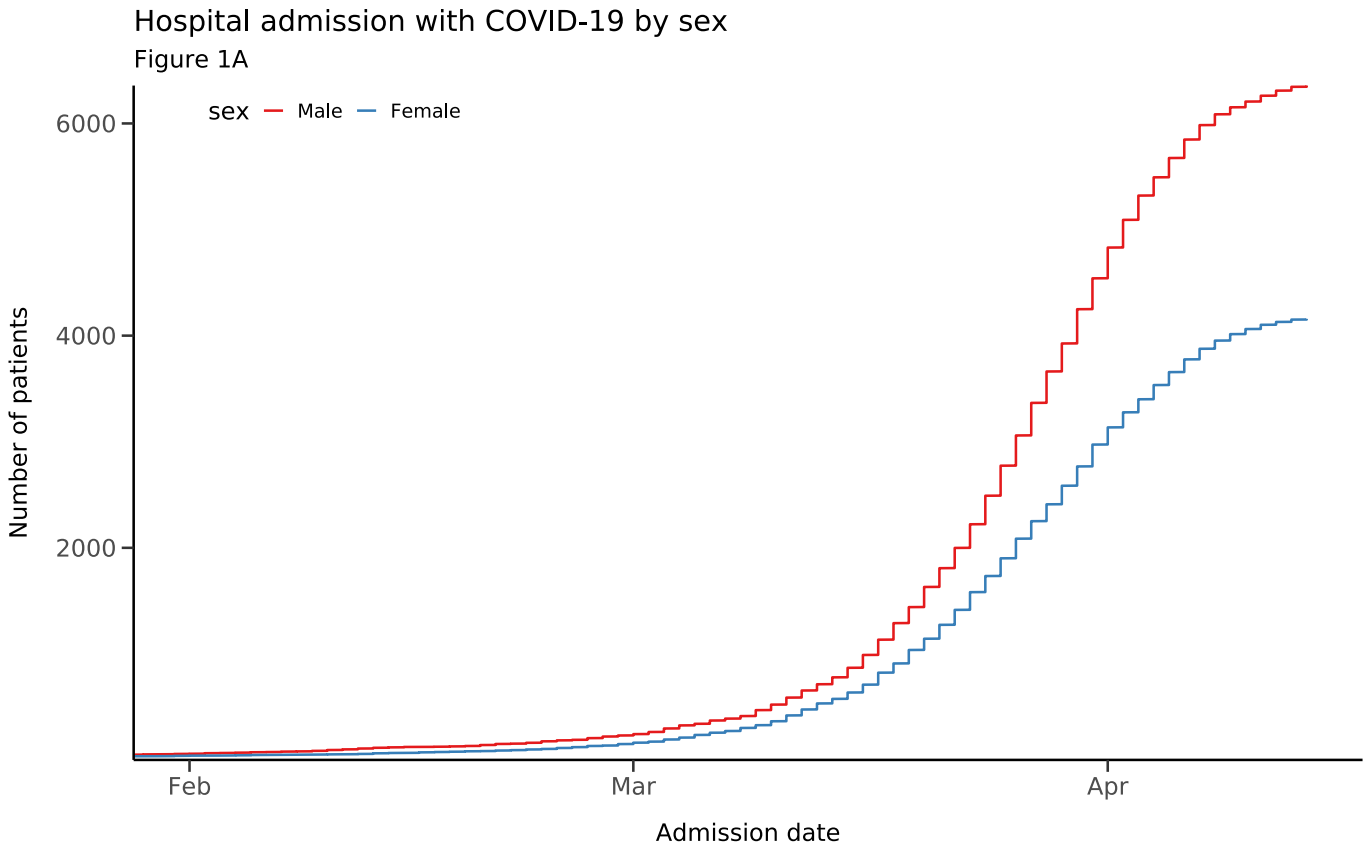
The commonest comorbidity is chronic cardiac disease, reflecting patterns seen in other countries, although nearly a quarter of patients admitted do not have underlying comorbid disease.

Patients documented as being admitted to ICU are mainly 50-75 years old. When interpreting admission to ICU it is important to remember that we are currently unable to capture treatment limiting decisions regarding level of care.

Prof Calum Semple, Professor in Child Health and Outbreak Medicine, University of Liverpool.
Dr Annemarie Docherty, Academic Consultant Intensive Care University of Edinburgh.
Dr Chris Green, Academic Consultant Infectious Disease University of Birmingham.
Prof Ewen Harrison, Director Centre for Medical Informatics, Usher Institute, University of Edinburgh (analysis).
Professor Tom Solomon, Director HPRU Emerging and Zoonotic Infection.
ISARIC Investigators (Prof. Peter Horby, Prof. Peter Openshaw, Dr Gail Carson, and Dr Kenneth Baillie).
Analytics: Lisa Norman, Riinu Pius, Thomas Drake, Cameron Fairfield, Stephen Knight, Kenneth McLean, Katie Shaw.

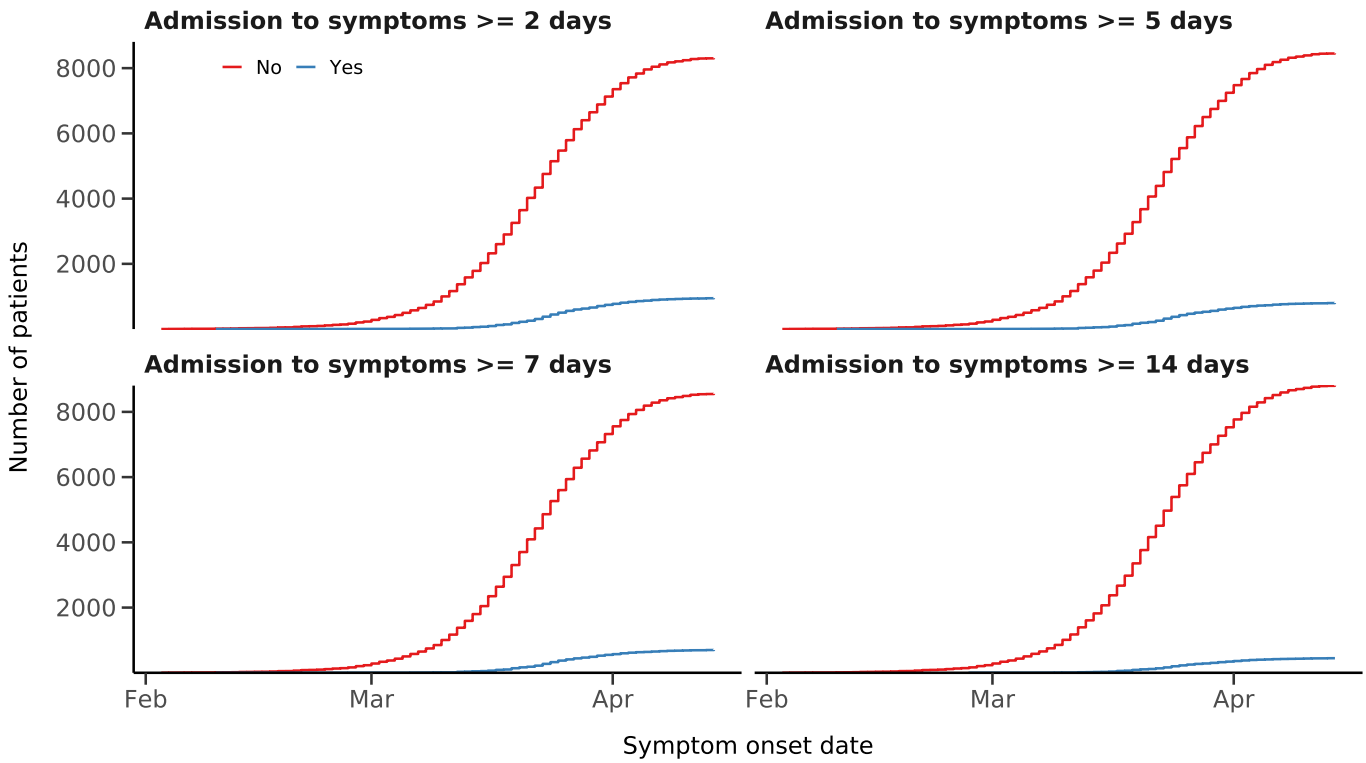
Admission

Figure 1



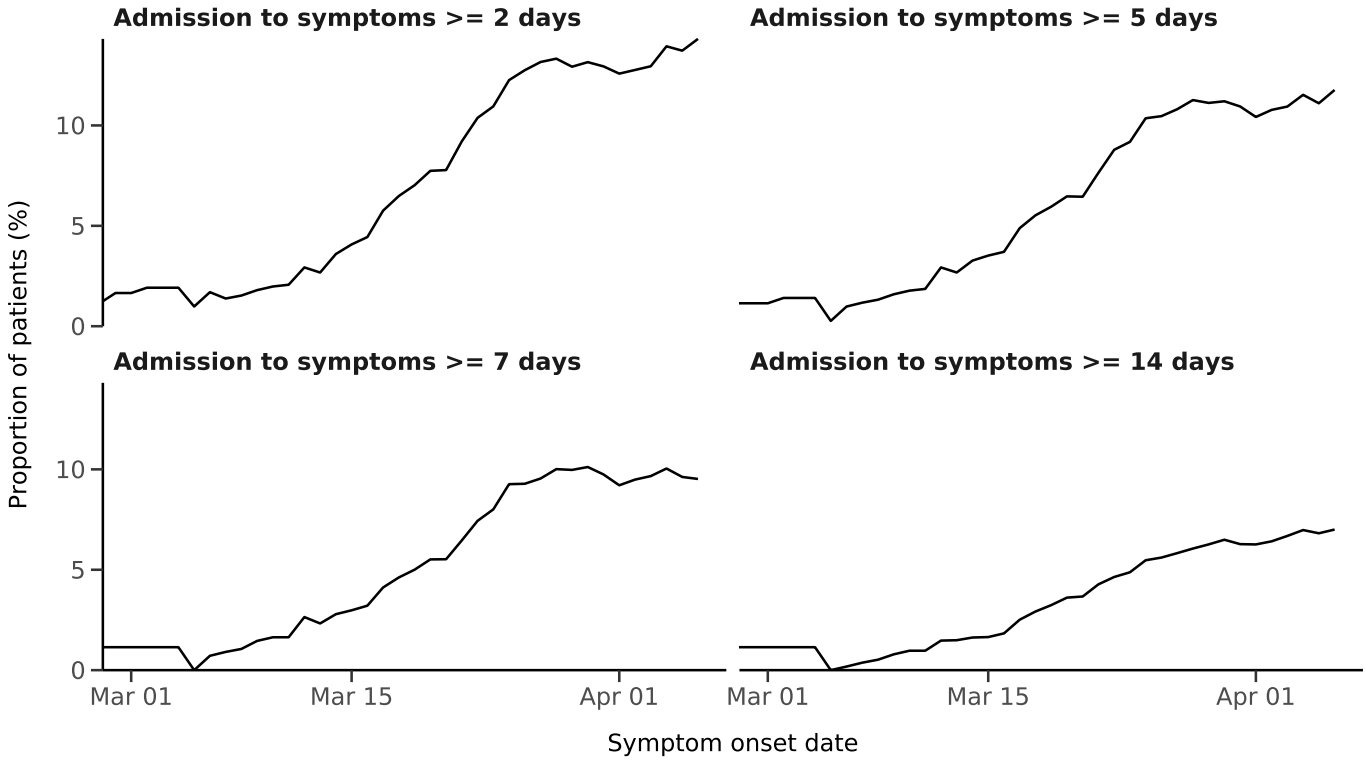
Number with symptom onset occuring after admission to hospital

Figure 1B



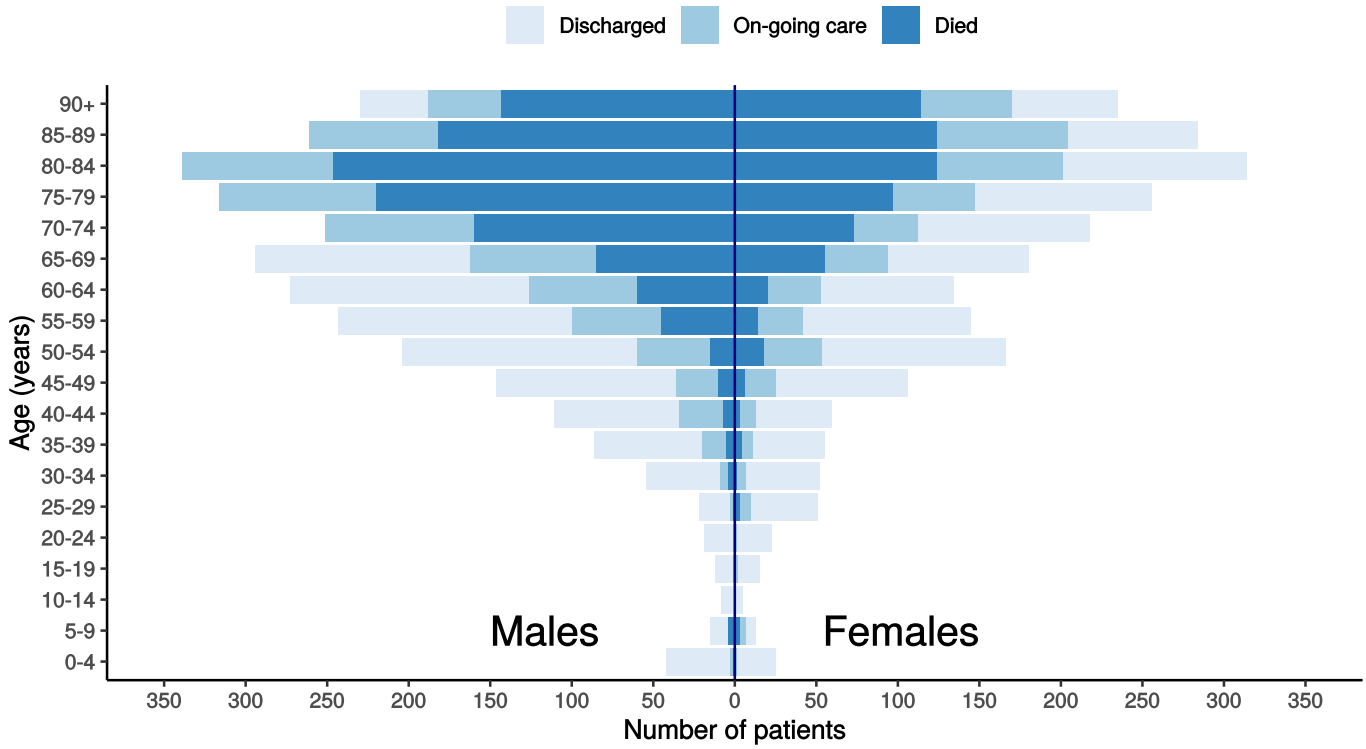
Proportion with symptom onset occuring after hospital admission

Figure 1C - 7-day rolling percentage. n = 9256



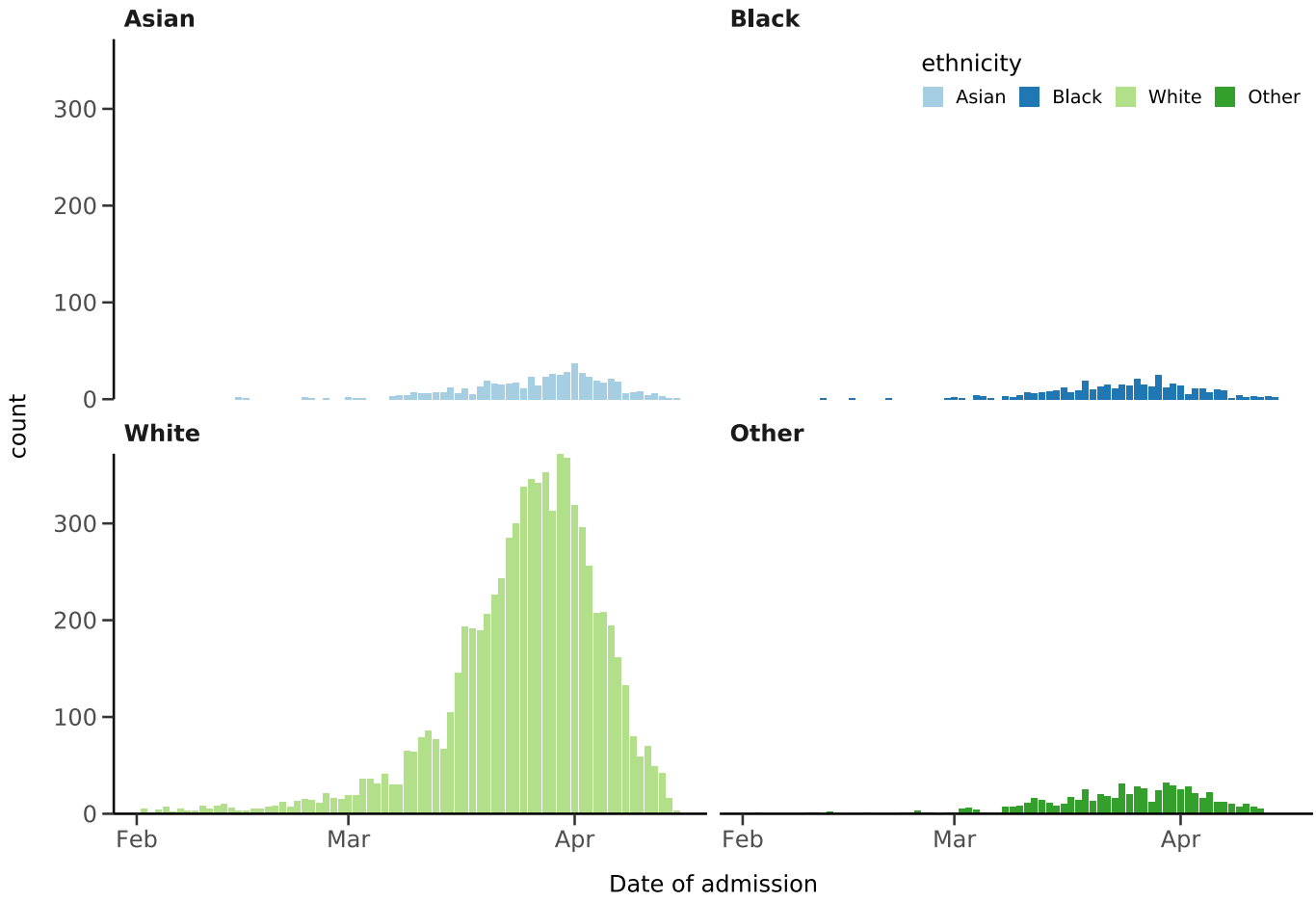
All patients stratified by age, sex, and current status

Figure 1D



Hospital admission with COVID-19 by ethnicity

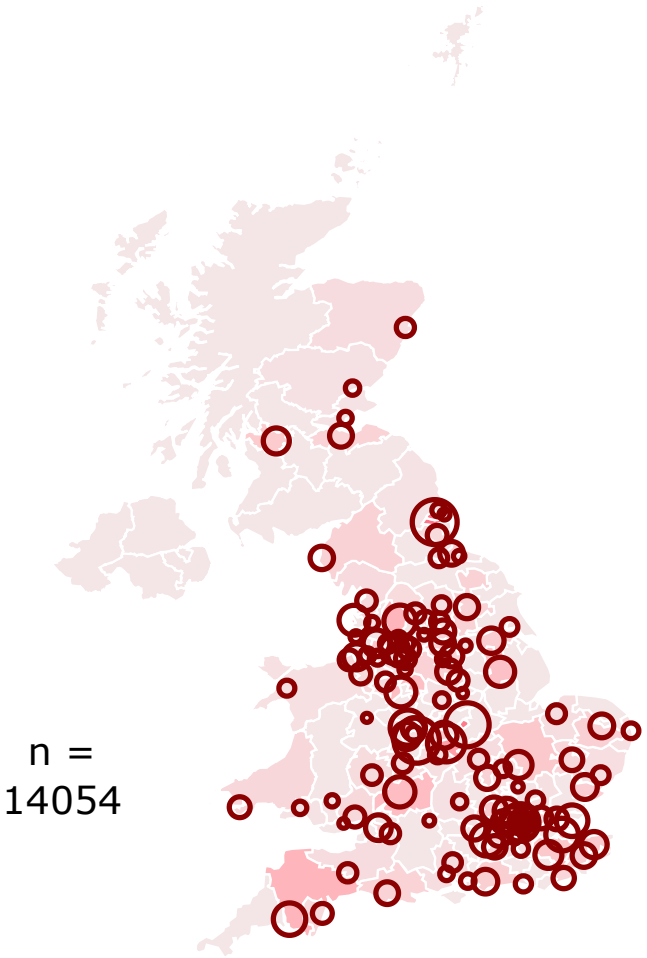
Figure 1E



Location by CCG / Healthboard

Figure 2

Click and drag on map to zoom into area. Reset via toolbar at top of map.



Symptoms and comorbidity

Figure 3A

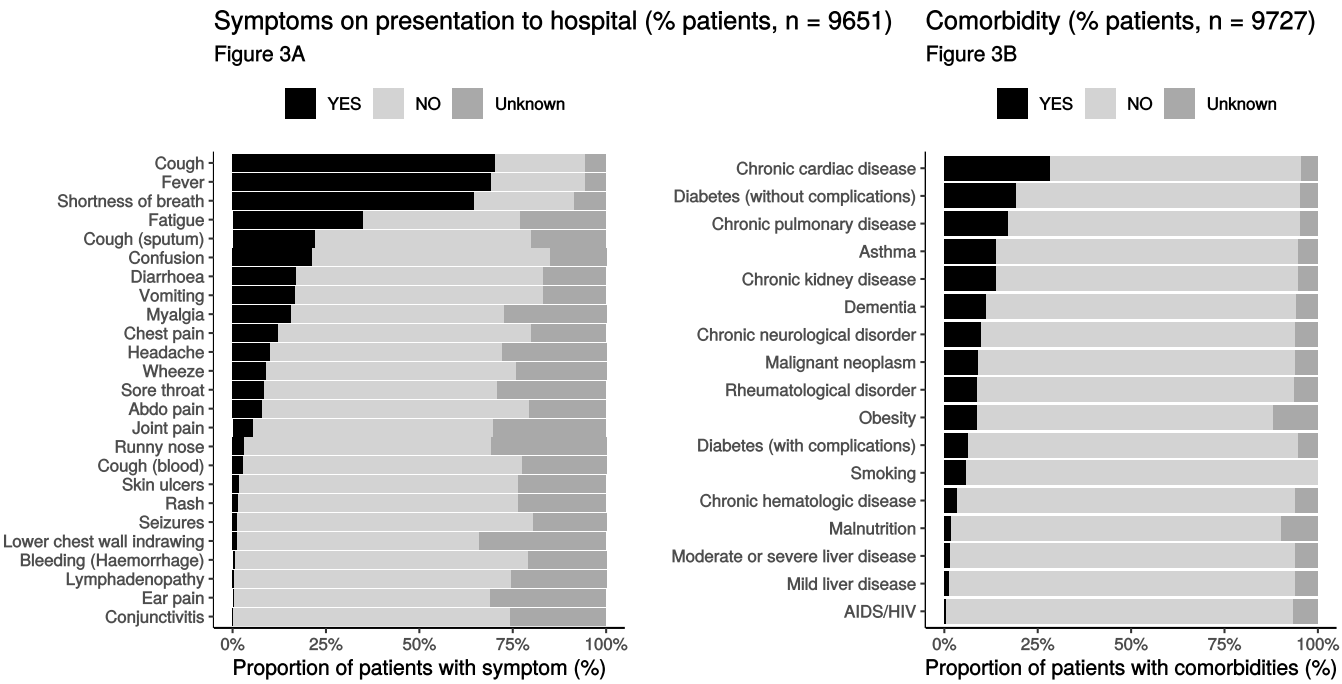
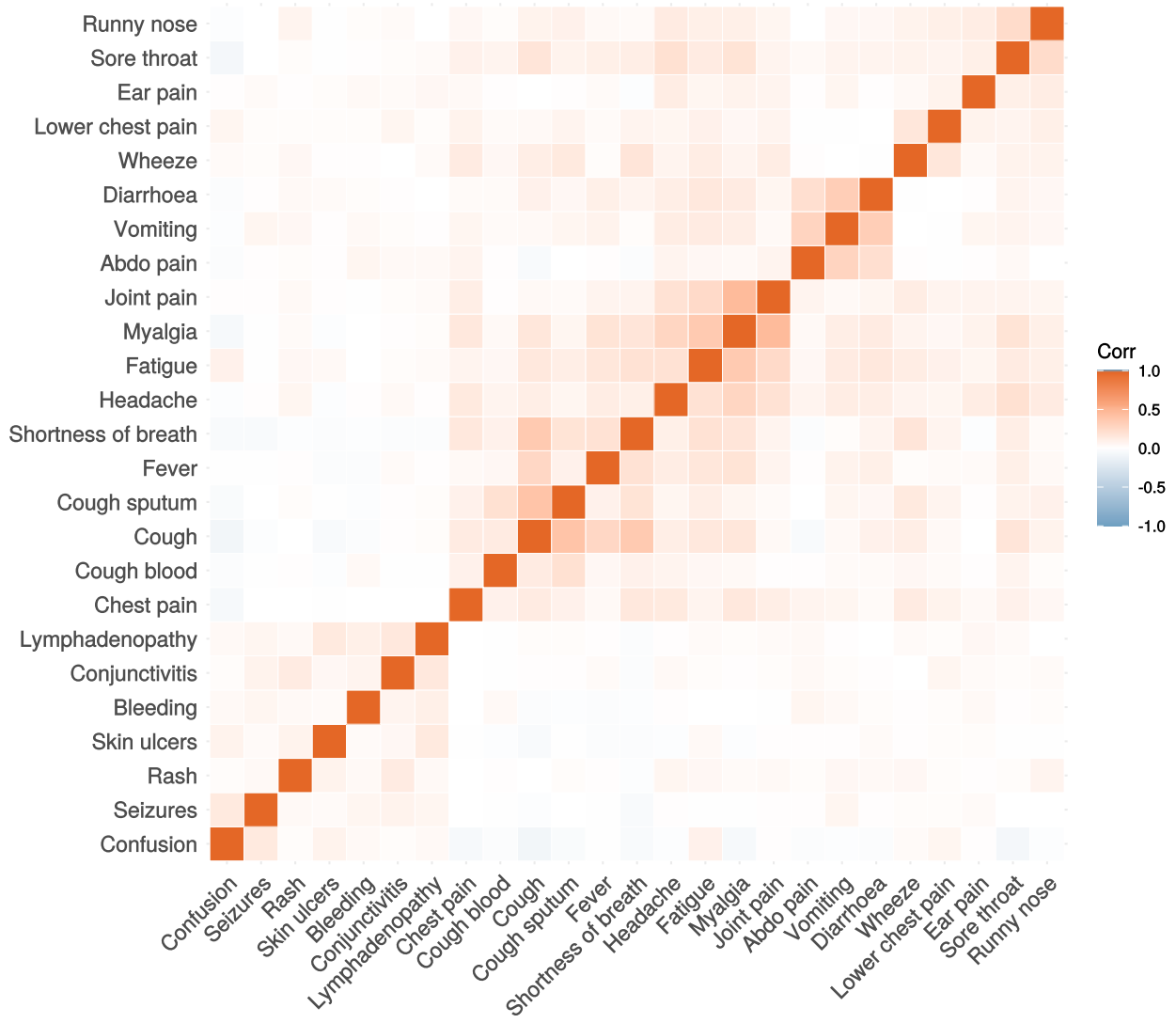


Figure 3C

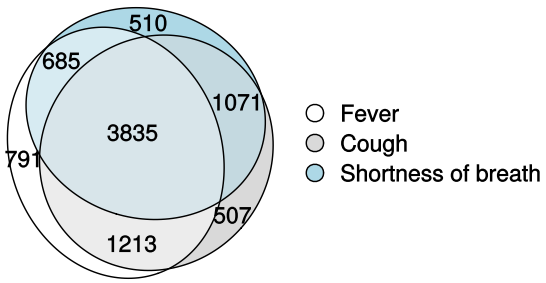
Correlation of symtpoms in all pages. Note clusters, top right to bottom left, flu-like, coryzal, abdominal, respiratory, neurocutaneous.



Symptoms (diagnostic criteria)

Figure 4A

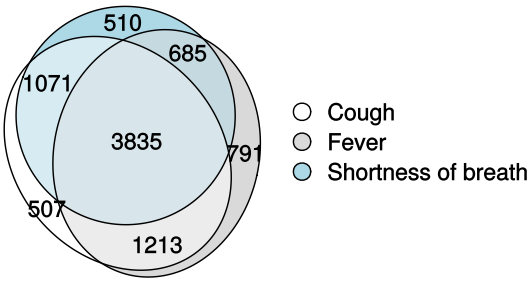
n = 9651



Symptoms (most common)

Figure 4B

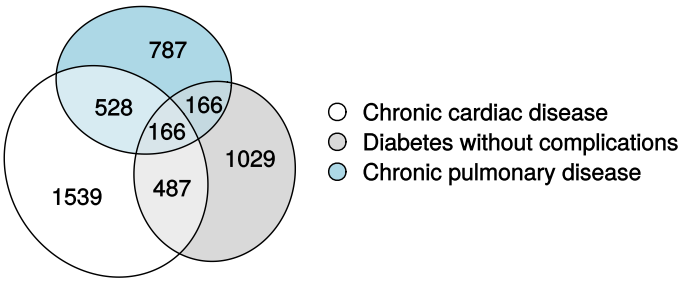
n = 9651



Comorbidity (most common)

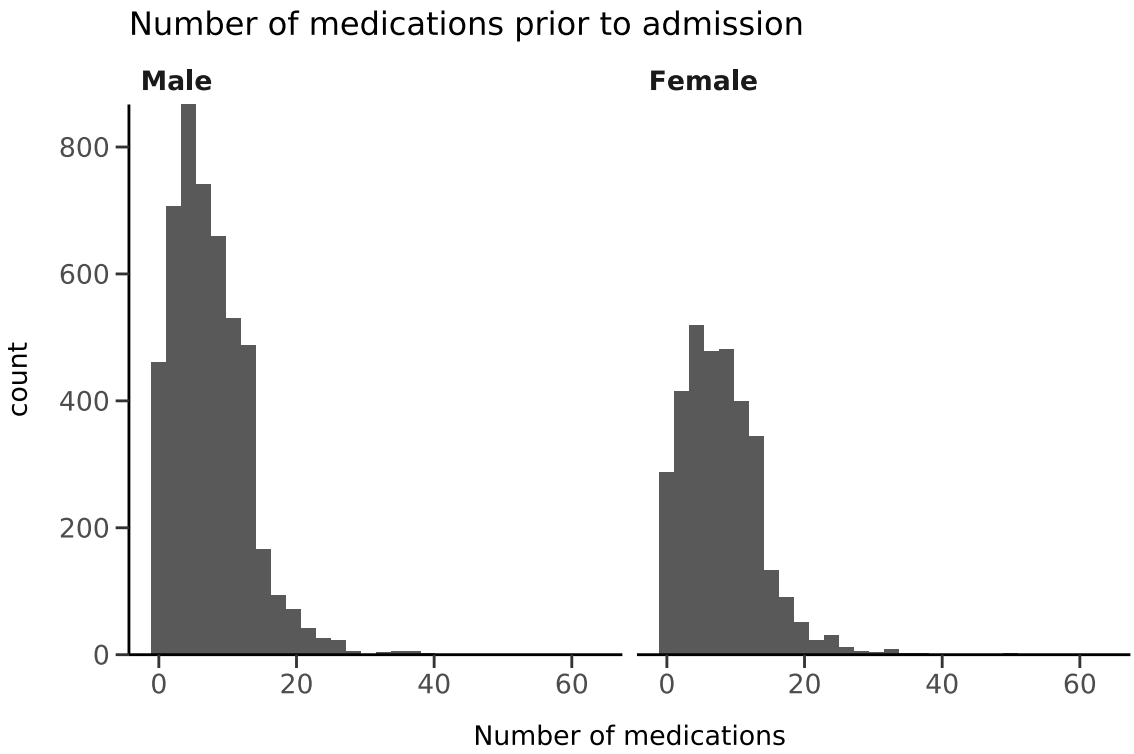
Figure 4C

n = 9727



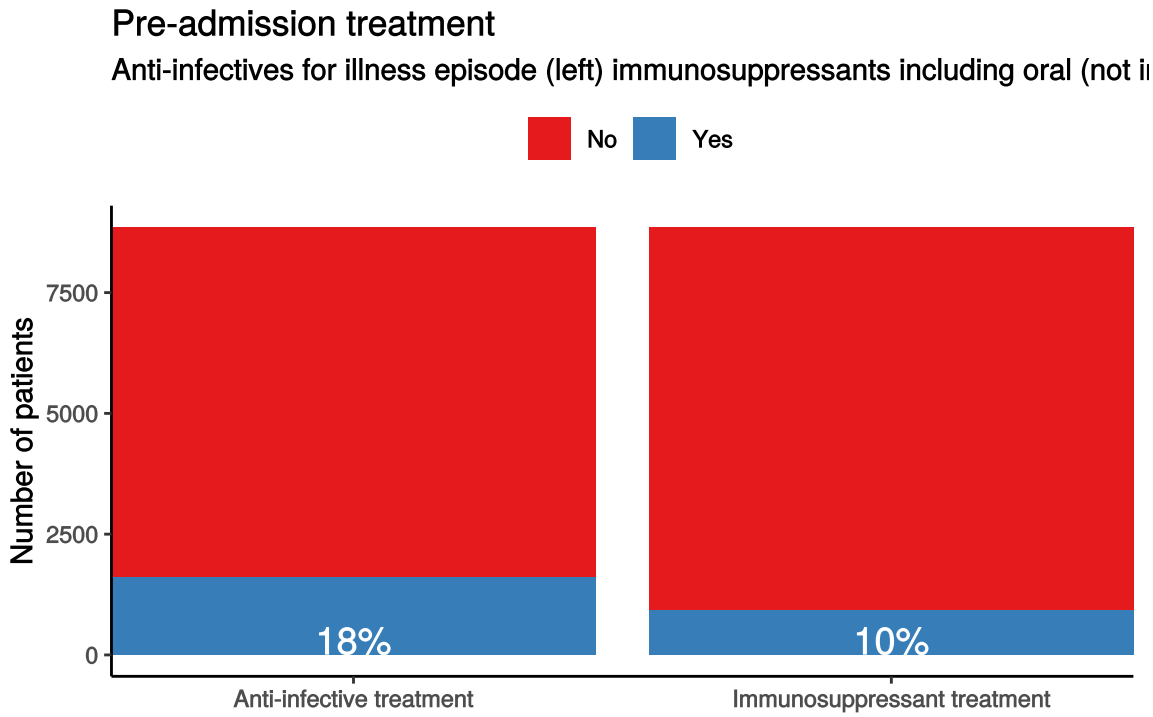
Medication prior to illness

Figure 5



Preadmission treatment

Figure 6



Patient flow

Figure 7A - All patients

N = 9724

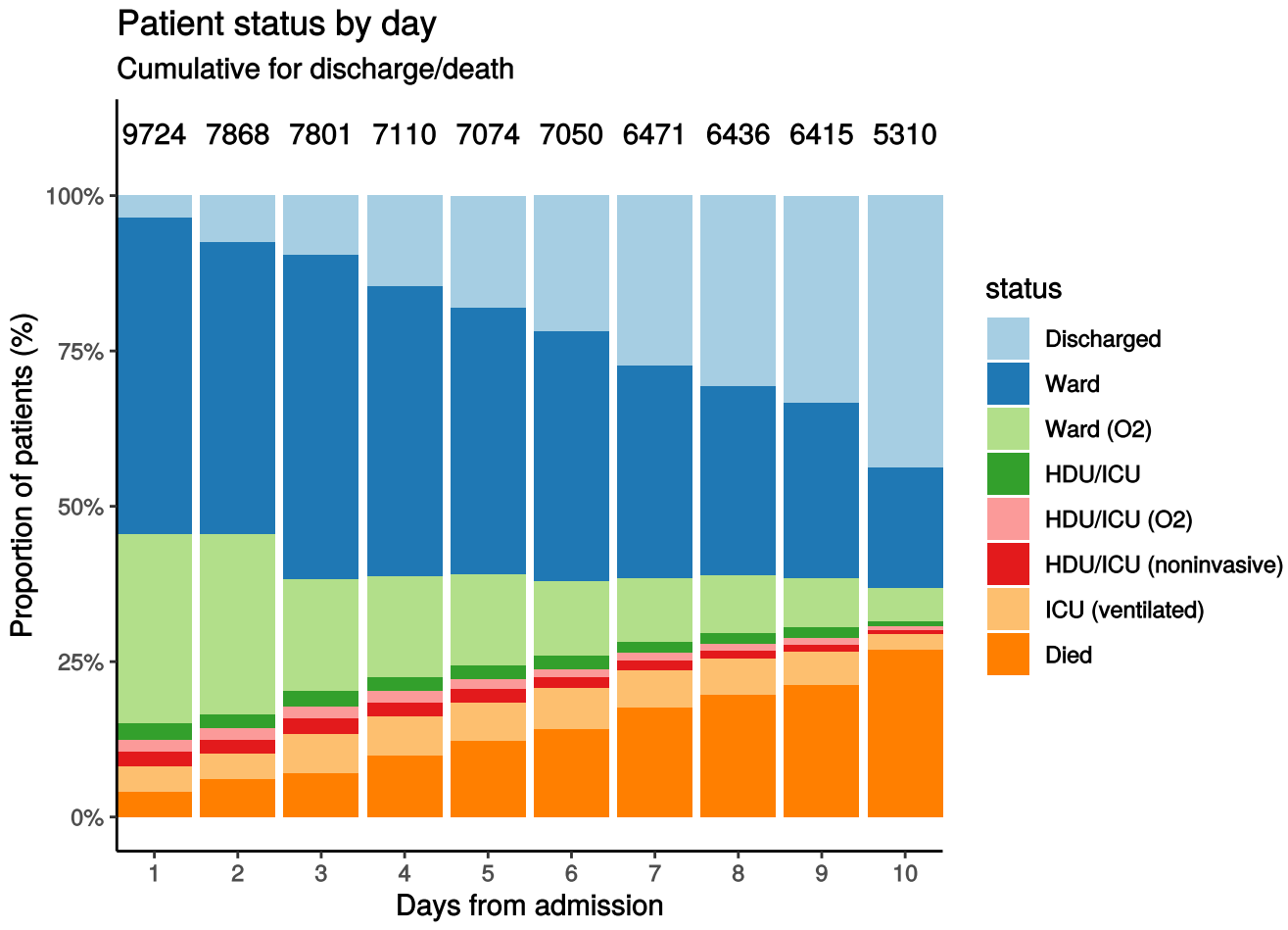
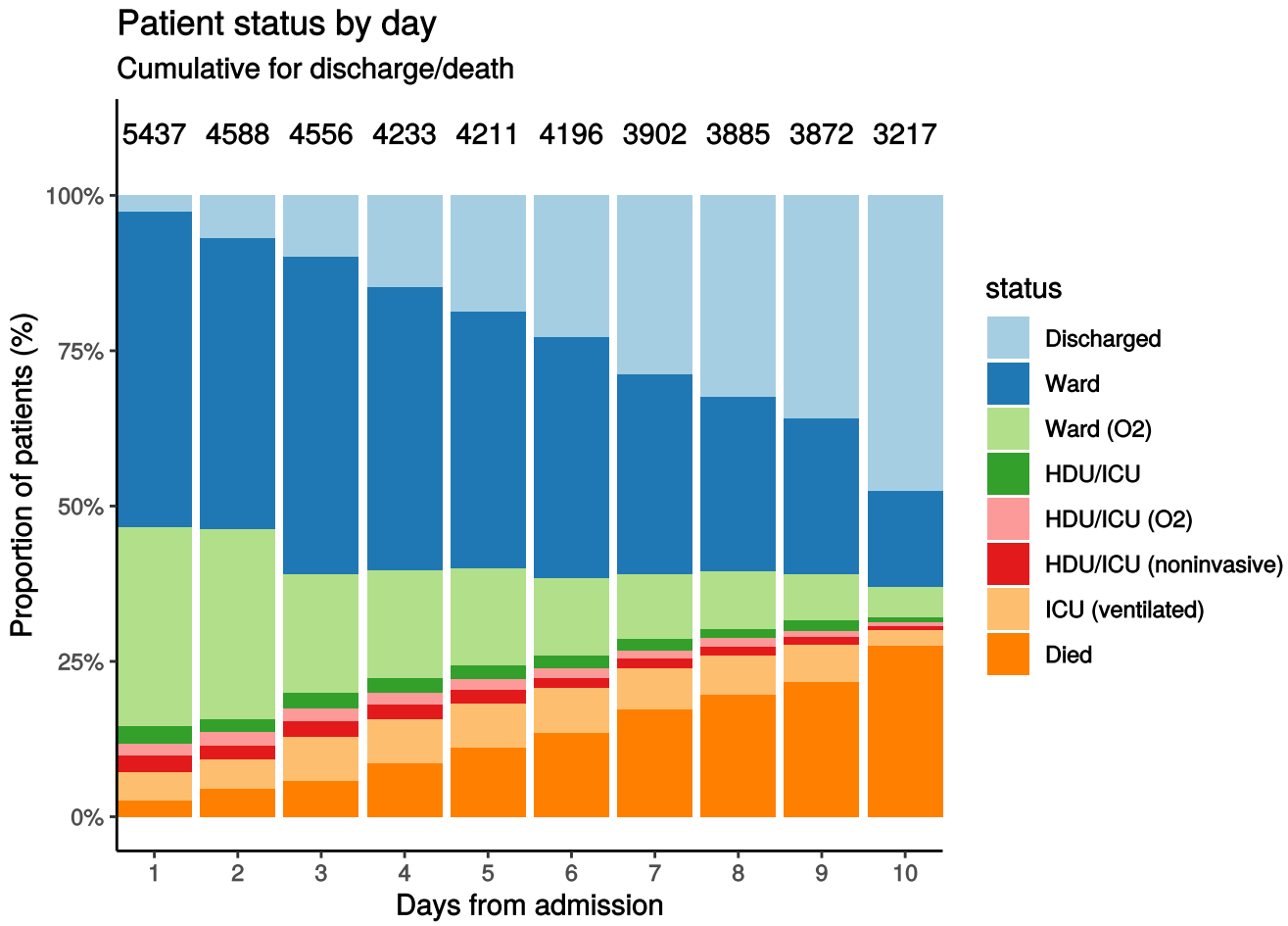


Figure 7B - Patients admitted >=14 days and <=28 days ago

N = 5437



Oxygen requirement

Figure 8A - All patients

N = 9040

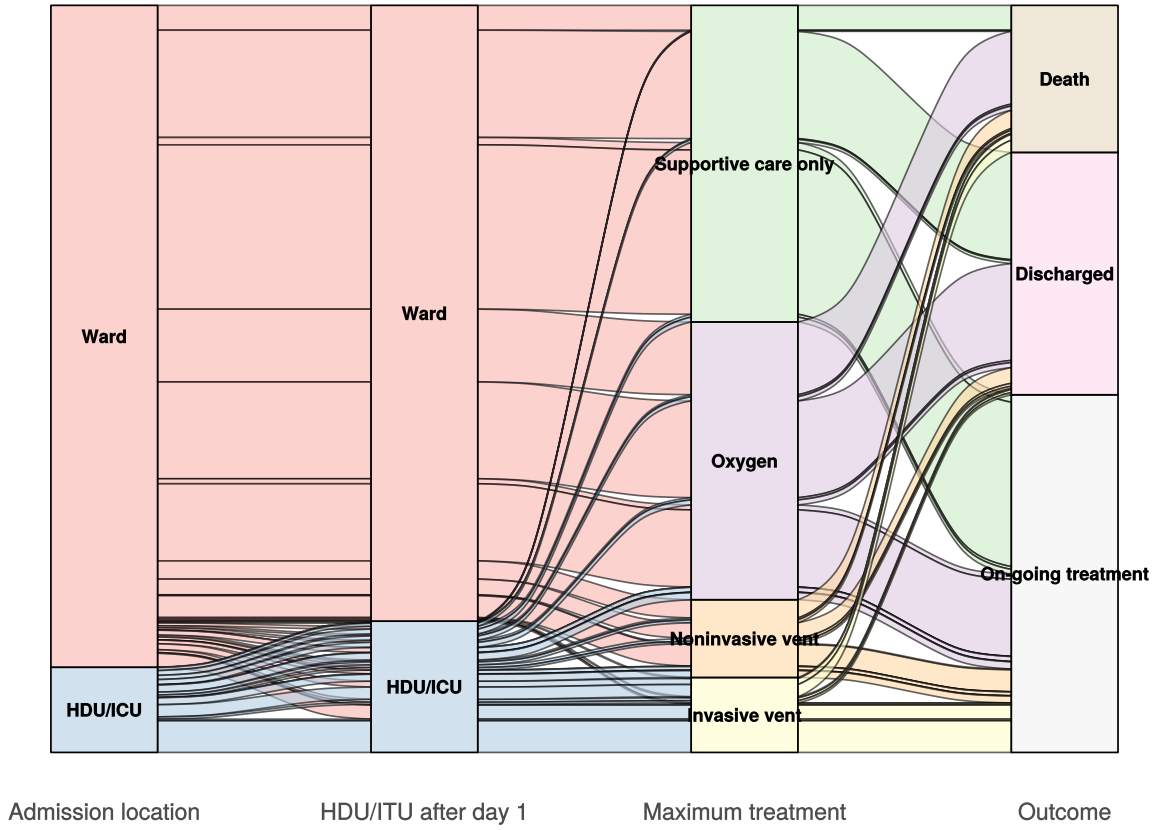
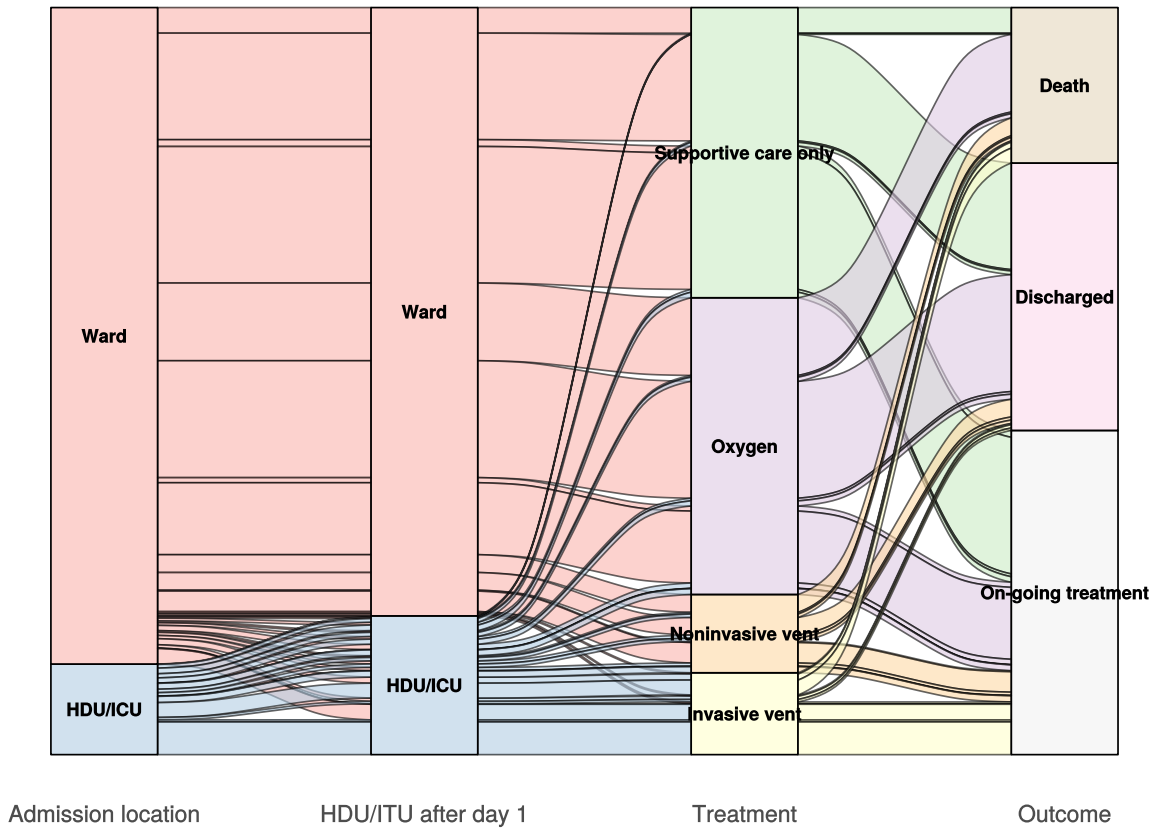


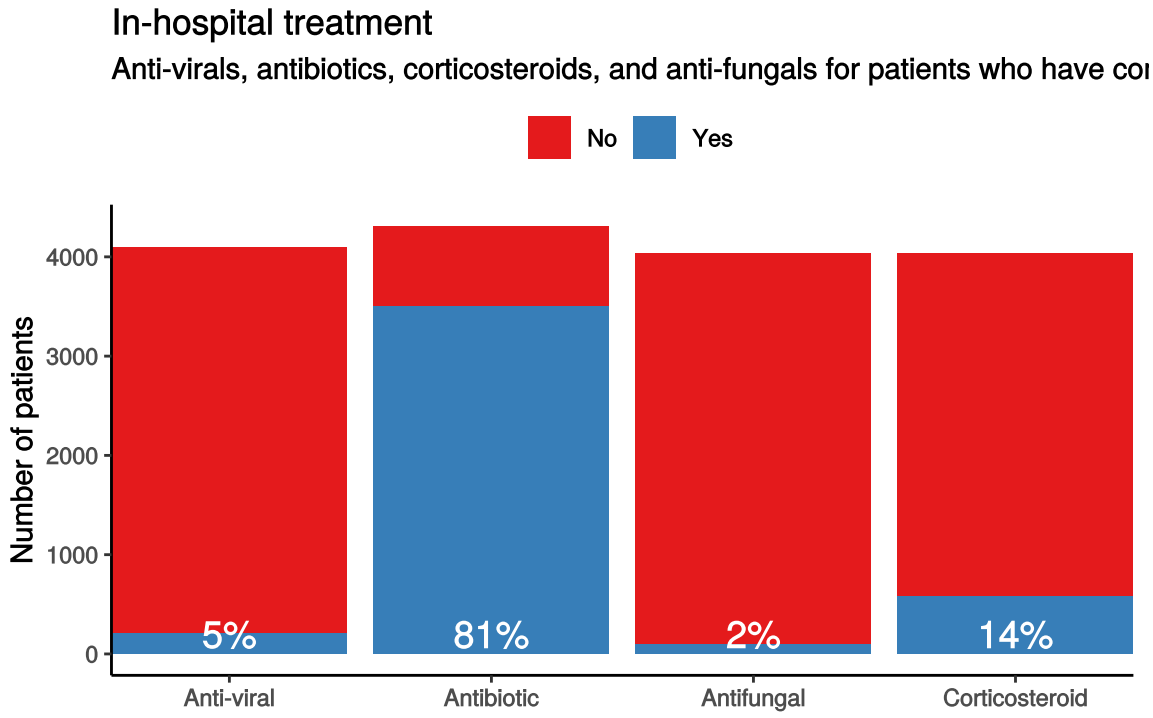
Figure 8B - Patients admitted >=14 days and <=28 days ago

N = 5131



In-hospital medical treatment

Figure 9

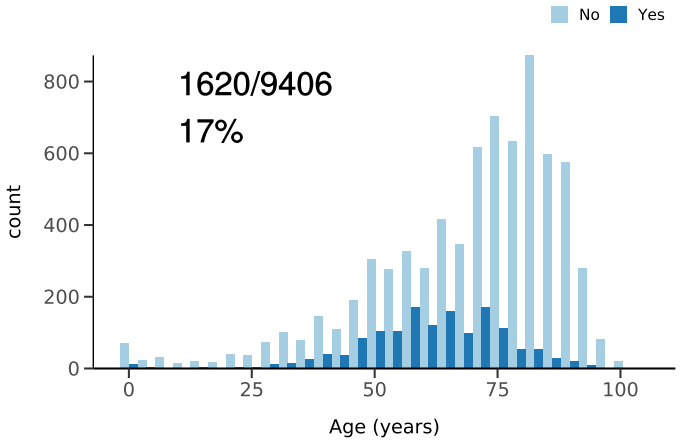


Treatment

Figure 10

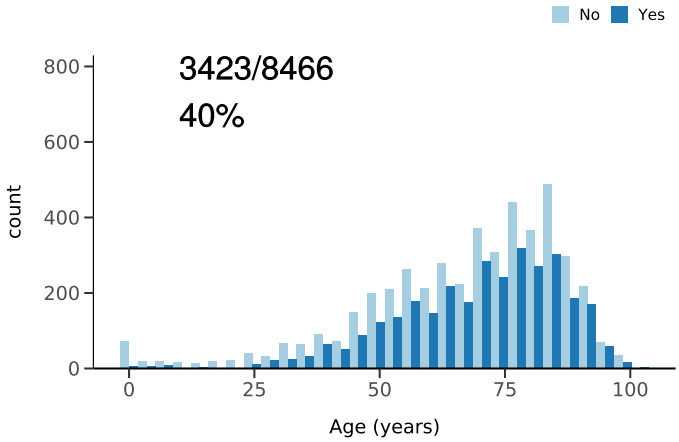
ICU/HDU admission

Figure 10A



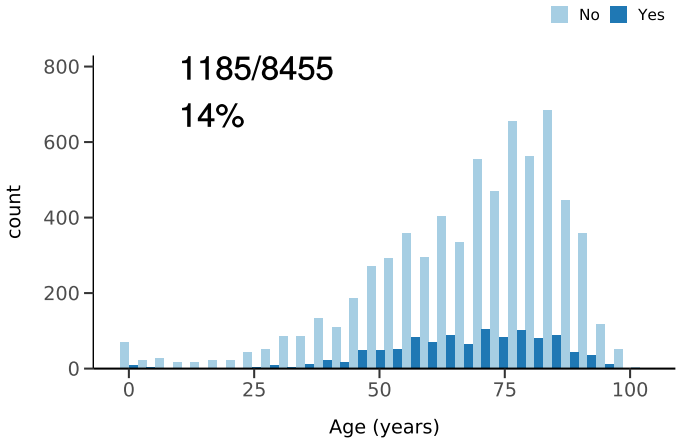
High flow oxygen

Figure 10B



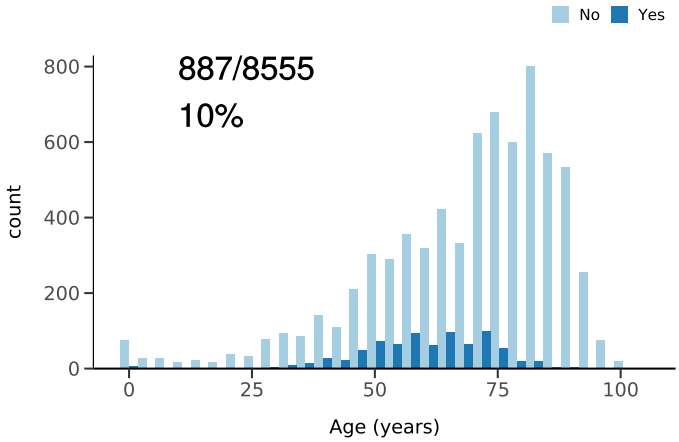
Noninvasive ventilation

Figure 10C



Invasive ventilation

Figure 10D

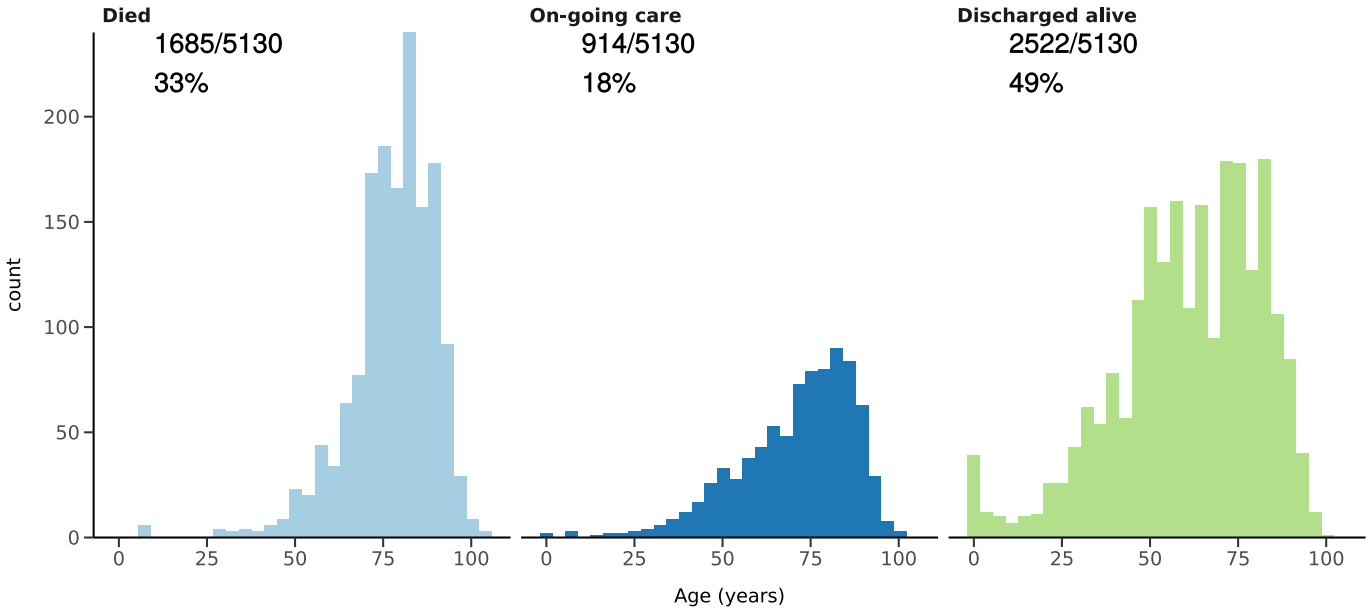


Status in patients admitted >=14 days from today

Figure 11

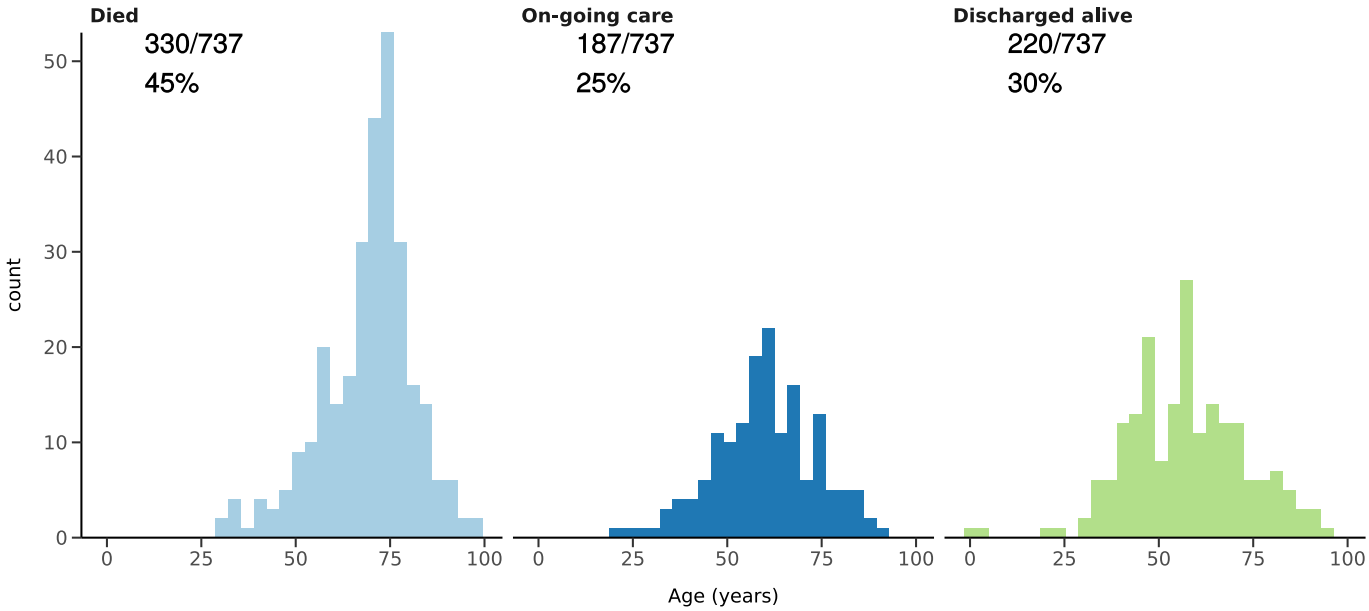
All: status in patients admitted >=14 days ago

Figure 11A



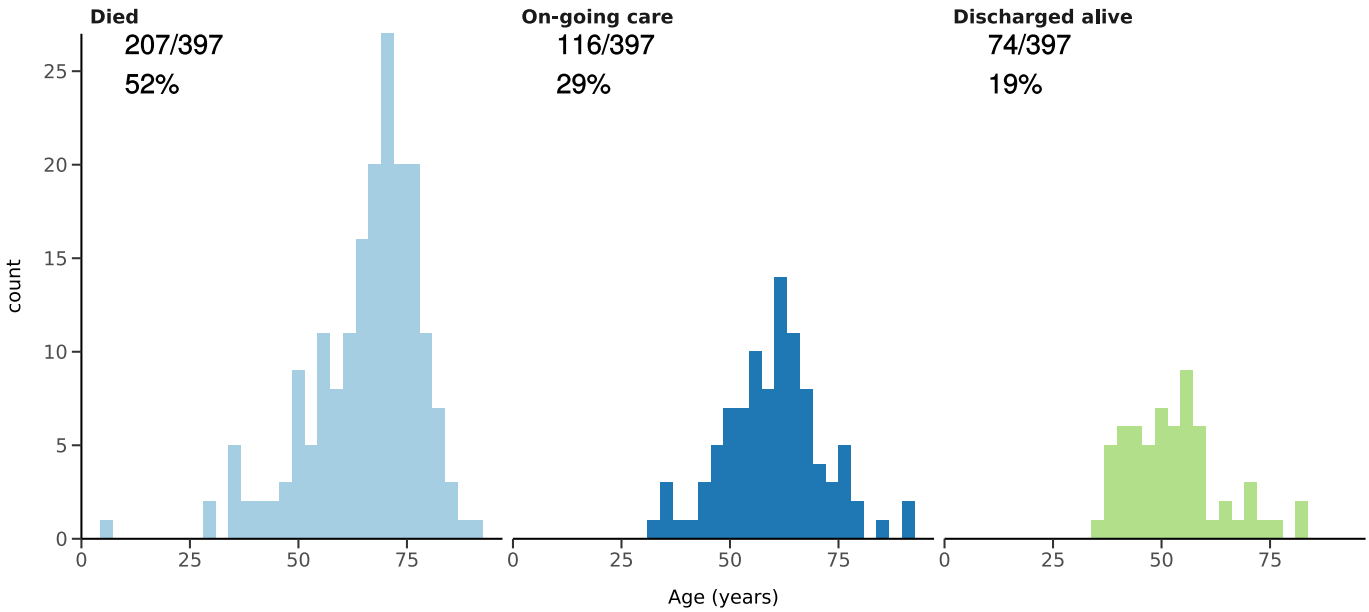
ICU/HDU admissions: status in patients admitted >=14 days ago

Figure 11B



Invasive ventilation: status in patients admitted >=14 days ago

Figure 11c



Predictors of death: logistic regression multivariable model

Logistic regression model only includes patients admitted >14 days ago from today.

Dependent: death		No	Yes	OR (univariable)	OR (multivariable)
Age on admission (years)	<50	617 (93.9)	40 (6.1)	•	•
	50-69	841 (76.2)	263 (23.8)	4.82 (3.44-6.93, p<0.001)	4.81 (3.23-7.42, p<0.001)
	70-79	485 (50.7)	471 (49.3)	14.98 (10.75-21.42, p<0.001)	13.37 (8.98-20.65, p<0.001)
	80+	561 (41.7)	784 (58.3)	21.56 (15.58-30.65, p<0.001)	18.75 (12.62-28.91, p<0.001)
Sex at Birth	Male	1542 (58.4)	1097 (41.6)	•	•
	Female	1163 (66.2)	595 (33.8)	0.72 (0.63-0.82, p<0.001)	0.71 (0.60-0.83, p<0.001)
Chronic cardiac disease	NO	1991 (69.8)	862 (30.2)	•	•
	YES	558 (46.2)	650 (53.8)	2.69 (2.34-3.09, p<0.001)	1.42 (1.19-1.69, p<0.001)
Chronic pulmonary disease	NO	2193 (65.8)	1139 (34.2)	•	•
	YES	346 (48.8)	363 (51.2)	2.02 (1.72-2.38, p<0.001)	1.34 (1.09-1.64, p=0.006)
Chronic neurological disorder	NO	2318 (64.3)	1288 (35.7)	•	•
	YES	186 (50.1)	185 (49.9)	1.79 (1.44-2.22, p<0.001)	1.35 (1.03-1.78, p=0.031)
Chronic hematologic disease	NO	2431 (63.8)	1382 (36.2)	•	•
	YES	65 (43.3)	85 (56.7)	2.30 (1.66-3.21, p<0.001)	1.87 (1.20-2.92, p=0.006)
Chronic kidney disease	NO	2265 (66.0)	1167 (34.0)	•	•

Dependent: death		No	Yes	OR (univariable)	OR (multivariable)
	YES	254 (43.6)	329 (56.4)	2.51 (2.10-3.01, p<0.001)	1.41 (1.12-1.77, p=0.003)
Dementia	NO	2328 (65.9)	1202 (34.1)	•	•
	YES	179 (40.0)	268 (60.0)	2.90 (2.37-3.55, p<0.001)	1.57 (1.22-2.02, p<0.001)
Obesity	NO	2128 (63.4)	1231 (36.6)	•	•
	YES	203 (60.8)	131 (39.2)	1.12 (0.88-1.40, p=0.353)	1.58 (1.18-2.11, p=0.002)
Malignancy	NO	2295 (64.4)	1267 (35.6)	•	•
	YES	204 (51.1)	195 (48.9)	1.73 (1.41-2.13, p<0.001)	1.22 (0.94-1.58, p=0.133)

Number in dataframe = 7974, Number in model = 3249, Missing = 4725, AIC = 3551, C-statistic = 0.764, H&L = Chi-sq(8) 26.02 (p=0.001)

Figure 11 - Adjusted odds ratio plot

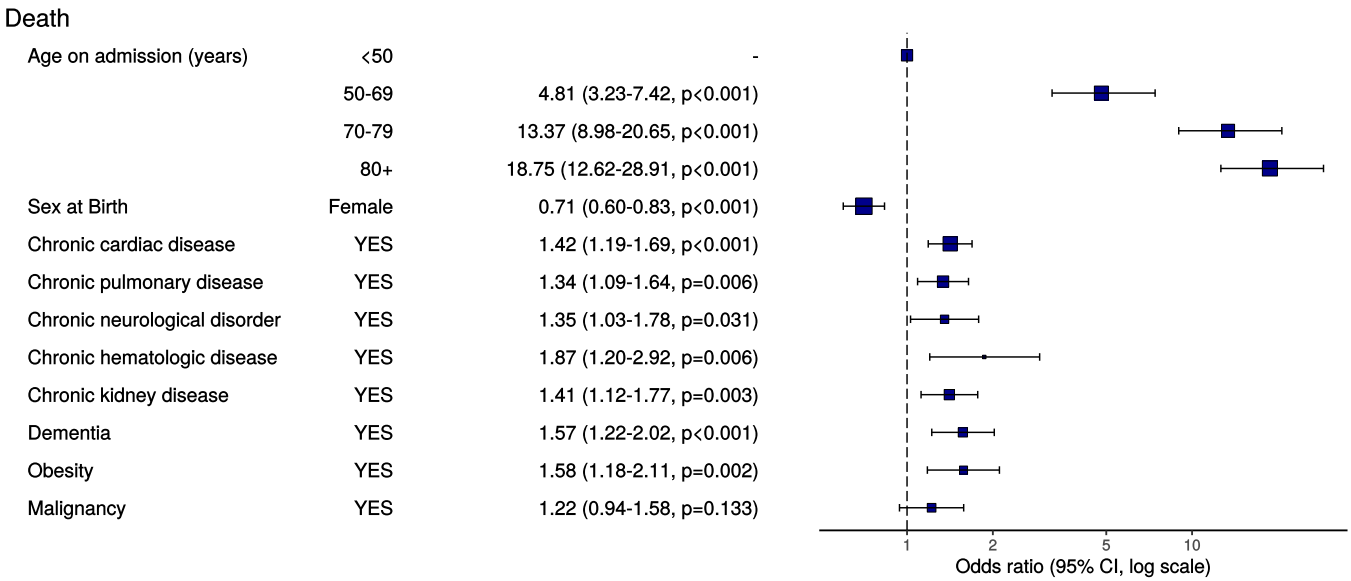
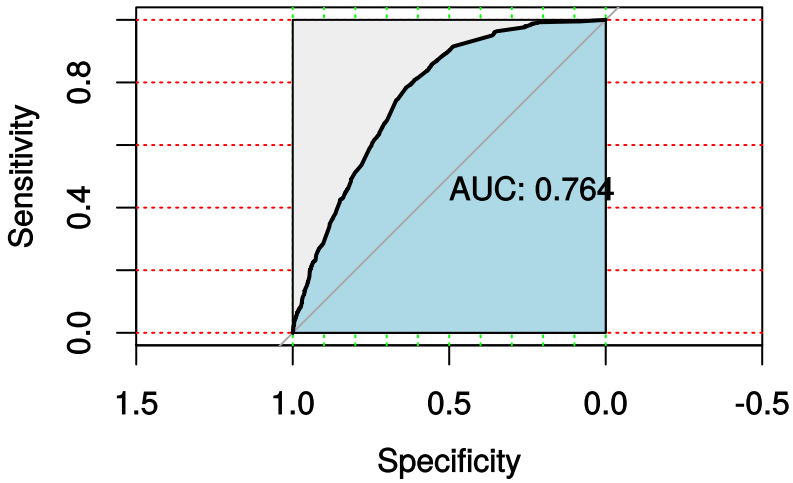


Figure 12 - ROC

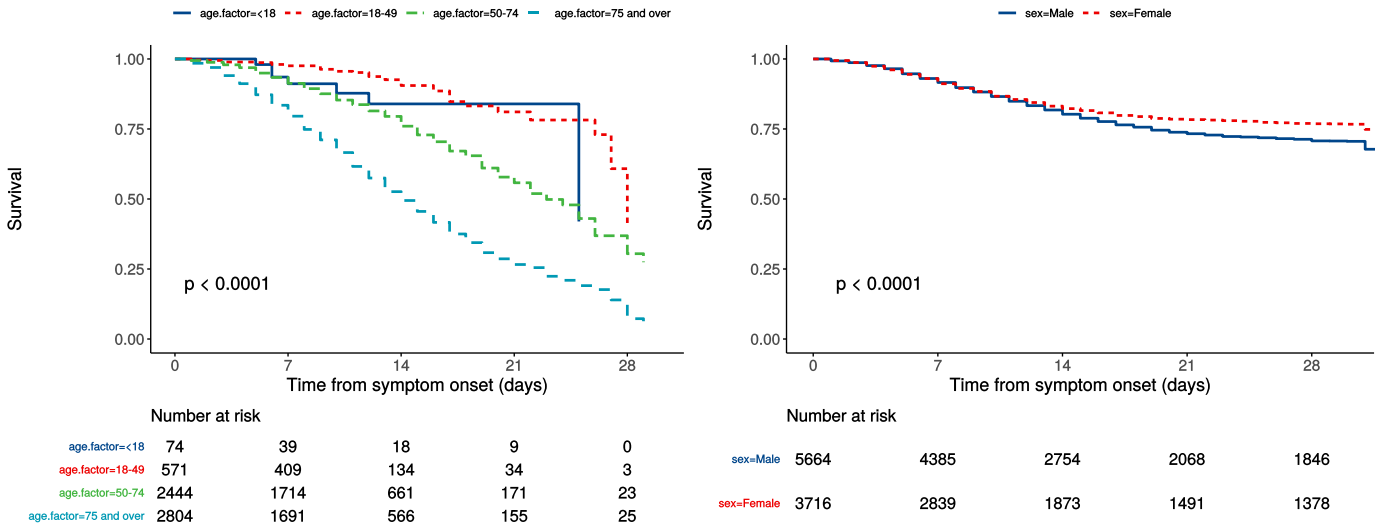


Survival models

Kaplan-Meier plots for survival from symptom onset stratified by age (left) and sex (right)

Figure 13

P-value is log-rank test.



Cox proportional hazards model

The methodology for this is now up and running, but models are still being explored. **What is presented here is not a final model, but to demonstrate methodology**. The results are correct, but important variables have not yet been included.

Time from symptom onset.

Dependent: Surv(time, status)		all	HR (univariable)	HR (multivariable)
Age on admission (years)	<50	1633 (16.5)	•	•

Dependent: Surv(time, status)		all	HR (univariable)	HR (multivariable)
	50-69	3072 (31.0)	3.77 (2.75-5.17, p<0.001)	3.89 (2.53-5.96, p<0.001)
	70-79	2186 (22.1)	10.70 (7.89-14.52, p<0.001)	9.63 (6.33-14.64, p<0.001)
	80+	3020 (30.5)	15.13 (11.21-20.41, p<0.001)	13.18 (8.69-19.99, p<0.001)
Sex at Birth	Male	6190 (59.3)	•	•
	Female	4244 (40.7)	0.75 (0.68-0.83, p<0.001)	0.74 (0.65-0.84, p<0.001)
qSOFA score on admission	0	2650 (39.7)	•	•
	1	3249 (48.7)	1.54 (1.36-1.75, p<0.001)	1.50 (1.30-1.73, p<0.001)
	2	709 (10.6)	3.02 (2.57-3.55, p<0.001)	2.93 (2.44-3.52, p<0.001)
	3	66 (1.0)	5.80 (4.13-8.13, p<0.001)	4.89 (3.31-7.23, p<0.001)
Symptomatic at presentation	No symptoms	196 (2.0)	•	•
	Symptoms	9783 (98.0)	1.02 (0.72-1.44, p=0.929)	•
Chronic kidney disease	NO	8255 (87.4)	•	•
	YES	1194 (12.6)	2.26 (2.01-2.55, p<0.001)	1.23 (1.05-1.43, p=0.010)
Moderate/severe liver disease	NO	9233 (98.4)	•	•
	YES	150 (1.6)	1.36 (0.95-1.94, p=0.089)	•
Chronic neurological disorder	NO	8455 (90.2)	•	•
	YES	917 (9.8)	1.99 (1.74-2.28, p<0.001)	•

Dependent: Surv(time, status)		all	HR (univariable)	HR (multivariable)
Malignancy	NO	8551 (91.3)	•	•
	YES	812 (8.7)	1.90 (1.65-2.19, p<0.001)	1.34 (1.13-1.61, p=0.001)
Chronic hematologic disease	NO	9040 (96.7)	•	•
	YES	309 (3.3)	1.91 (1.54-2.37, p<0.001)	•
Obesity	NO	7930 (90.2)	•	•
	YES	858 (9.8)	1.05 (0.88-1.24, p=0.595)	1.48 (1.20-1.83, p<0.001)
Diabetes with complications	NO	8863 (93.8)	•	•
	YES	590 (6.2)	1.27 (1.05-1.53, p=0.013)	•
Rheumatologic disorder	NO	8546 (91.6)	•	•
	YES	783 (8.4)	1.52 (1.30-1.77, p<0.001)	•
Dementia	NO	8324 (88.6)	•	•
	YES	1073 (11.4)	2.23 (1.96-2.53, p<0.001)	1.08 (0.91-1.29, p=0.362)
Malnutrition	NO	8832 (98.1)	•	•
	YES	169 (1.9)	2.01 (1.51-2.67, p<0.001)	•
Smoking	NO	7396 (93.5)	•	•
	YES	514 (6.5)	0.86 (0.67-1.10, p=0.233)	•
NA	NA	NA	NA	1.47 (1.29-1.68, p<0.001)

Number in dataframe = 11880, Number in model = 5311, Missing = 6569, Number of events = 1034, Concordance = 0.750 (SE = 0.007), R-squared = 0.145(Max possible = 0.958), Likelihood ratio test = 829.619 (df = 12, p = 0.000)

Figure 14a - Multivariable Cox proportional hazards model

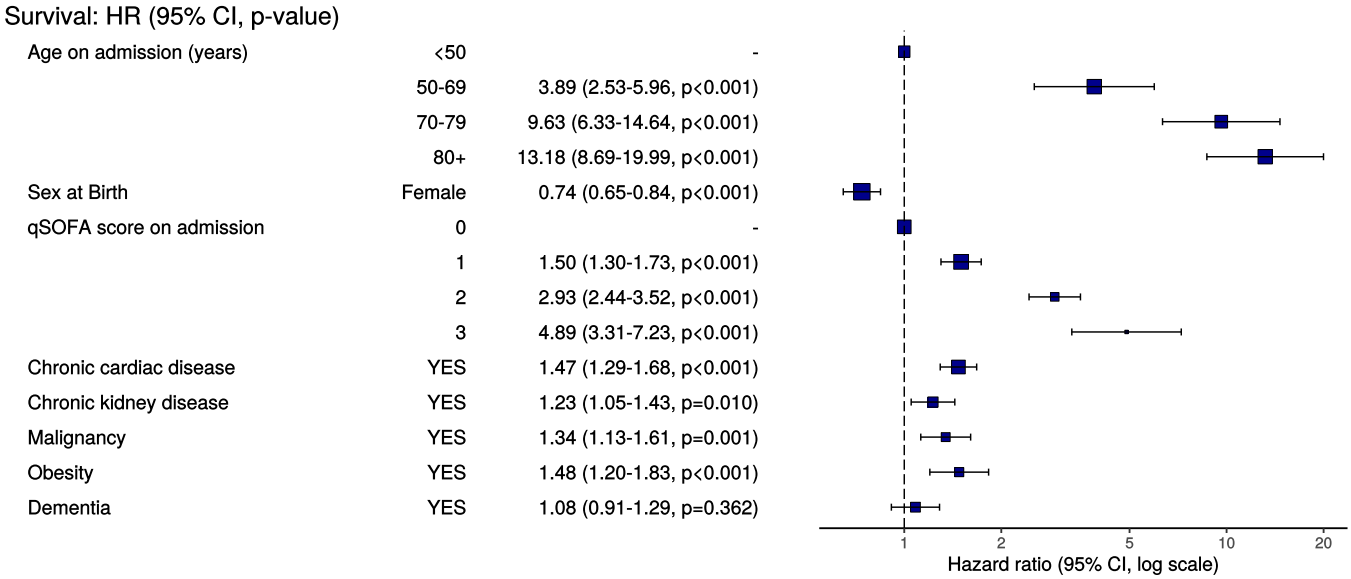
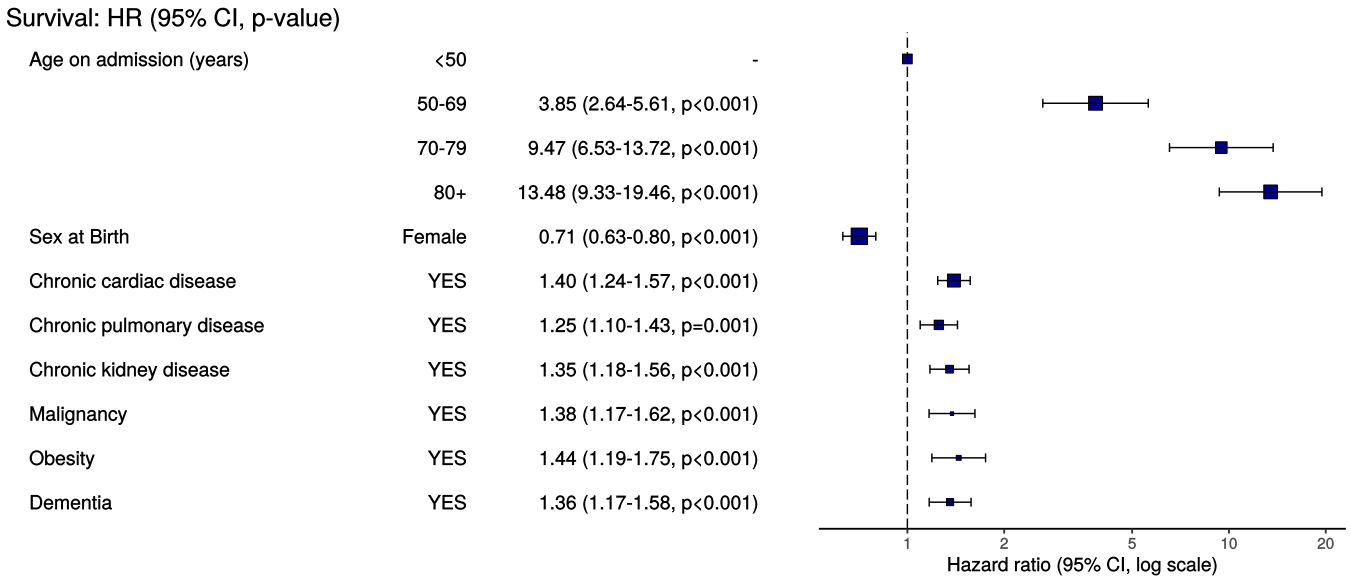


Figure 14b - Multivariable Cox proportional hazards model (age, sex, comorbidities only)



ROC = 0.7523071

Figure 15 - Predictions calibration plot

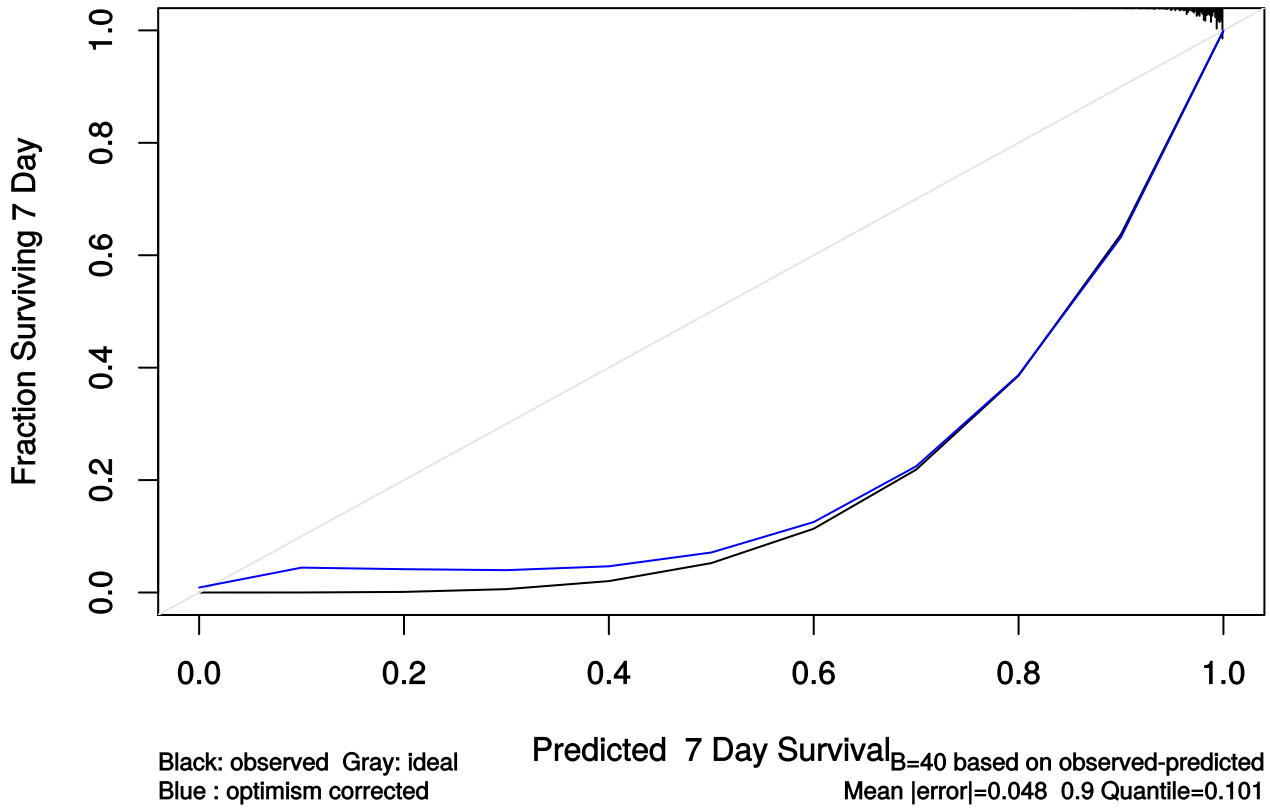


Figure 16 - Prognostic model predictions

Again, for demonstration of methods.

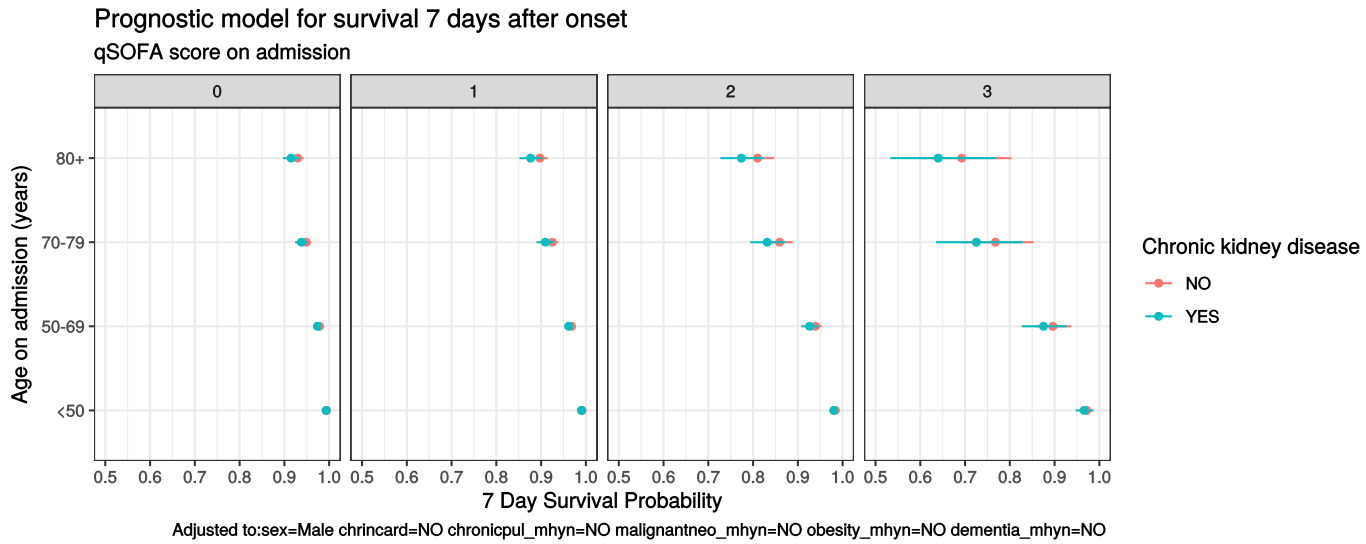


Figure 17 - Death by severity (NEWS) on admission

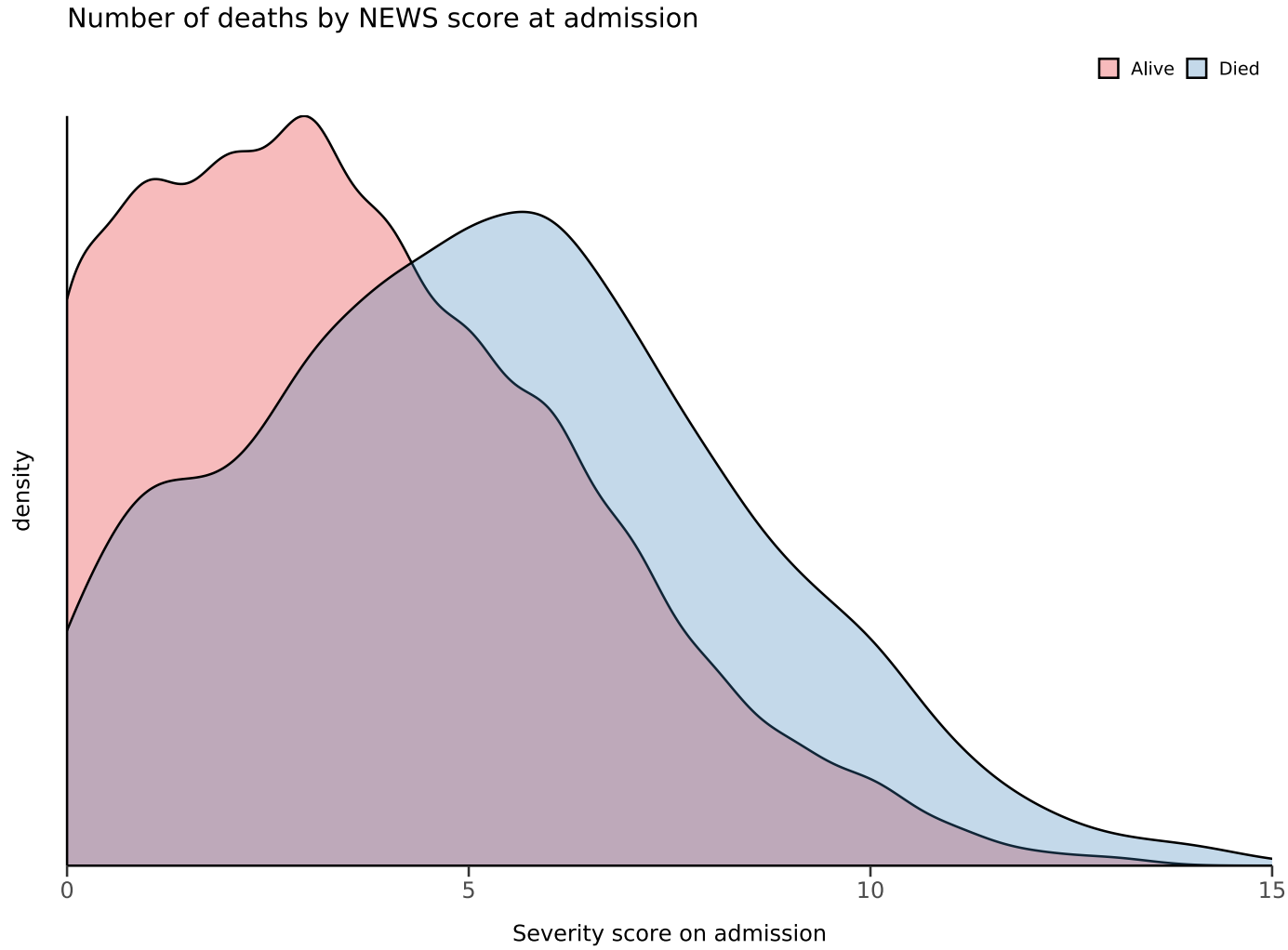


Figure 18 - Death by severity (NEWS) on admission stratified by age

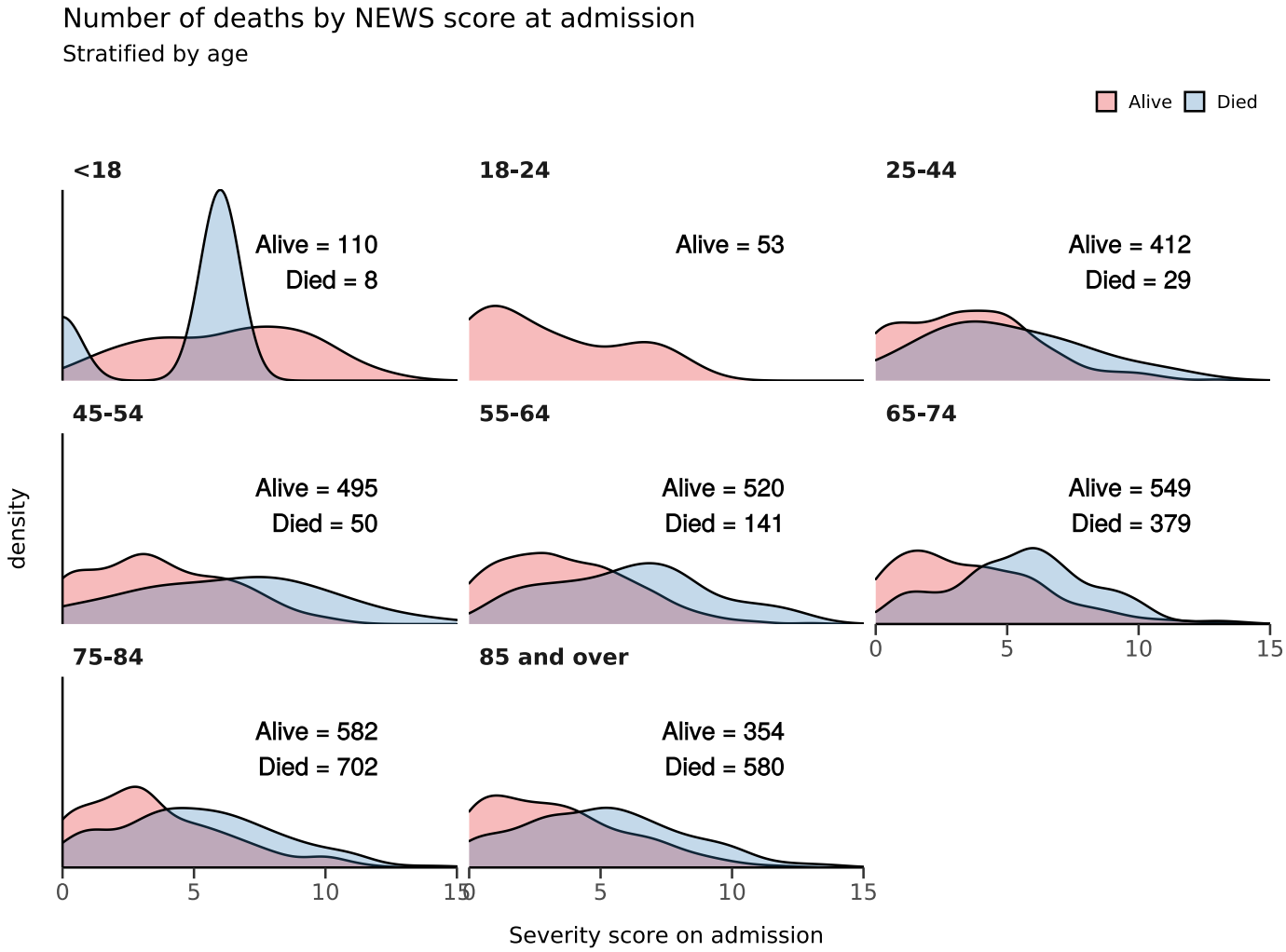
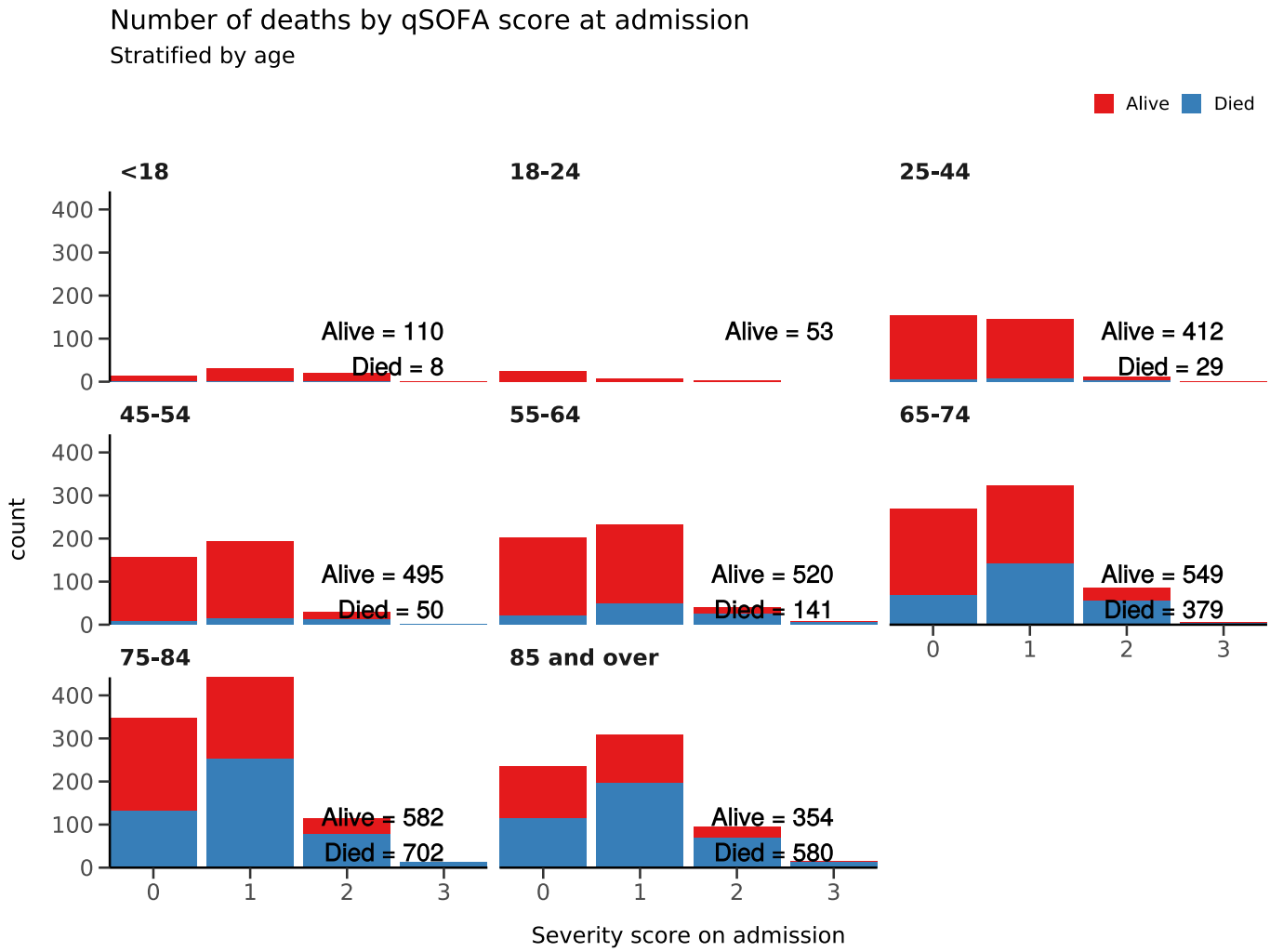


Figure 19 - Death by severity (qSOFA) on admission stratified by age



Healthcare workers

Healthcare worker		NO	YES	p
Total N (%)		9058 (95.7)	403 (4.3)	
NEWS score on admission	Median (IQR)	4.0 (4.0)	4.0 (4.0)	0.965
Death	No	2705 (60.1)	177 (94.1)	<0.001
	Yes	1796 (39.9)	11 (5.9)	

Admission (detail)

Table 1

label	levels	all
Total N (%)		14799 (100.0)
Age on admission (years)	Mean (SD)	68.0 (18.7)

label	levels	all
Sex at Birth	Male	6697 (45.3)
	Female	4406 (29.8)
	Not specified	15 (0.1)
	(Missing)	3681 (24.9)
Healthcare worker	YES	403 (2.7)
	NO	9058 (61.2)
	N/A	918 (6.2)
	(Missing)	4420 (29.9)
Microbiology lab worker	YES	25 (0.2)
	NO	9423 (63.7)
	N/A	928 (6.3)
	(Missing)	4423 (29.9)
Onset to admission (days)	Mean (SD)	3.8 (40.5)
Transfer from other facility	Yes-facility is a study site	173 (1.2)
	Yes-facility is not a study site	504 (3.4)
	No	9298 (62.8)
	N/A	236 (1.6)
	(Missing)	4588 (31.0)
Travel in 14 d prior to symptoms	Yes	537 (3.6)
	No	7703 (52.1)
	N/A	1325 (9.0)
	(Missing)	5234 (35.4)
Country	Antigua and Barbuda	1 (0.0)
	Argentina	1 (0.0)
	Australia	2 (0.0)
	Austria	16 (0.1)
	Barbados	11 (0.1)

label	levels	all
	Brazil	2 (0.0)
	Bulgaria	2 (0.0)
	Cambodia	1 (0.0)
	Canada	1 (0.0)
	Cabo Verde	1 (0.0)
	China	2 (0.0)
	Cuba	1 (0.0)
	Cyprus	16 (0.1)
	Czechia	1 (0.0)
	Dominican Republic	2 (0.0)
	Egypt	6 (0.0)
	France	29 (0.2)
	Germany	7 (0.0)
	Ghana	1 (0.0)
	Greece	1 (0.0)
	Hong Kong	1 (0.0)
	Hungary	2 (0.0)
	Iceland	1 (0.0)
	India	7 (0.0)
	Indonesia	1 (0.0)
	Iran	5 (0.0)
	Ireland	3 (0.0)
	Italy	79 (0.5)
	Japan	4 (0.0)
	Kenya	1 (0.0)
	Madagascar	1 (0.0)
	Malaysia	3 (0.0)

label	levels	all
	Mexico	1 (0.0)
	Morocco	3 (0.0)
	Netherlands	7 (0.0)
	New Zealand	2 (0.0)
	Nigeria	2 (0.0)
	Norway	1 (0.0)
	Pakistan	3 (0.0)
	Philippines	5 (0.0)
	Poland	3 (0.0)
	Portugal	10 (0.1)
	Romania	5 (0.0)
	Saudi Arabia	1 (0.0)
	Singapore	2 (0.0)
	Slovakia	1 (0.0)
	Somalia	1 (0.0)
	South Africa	5 (0.0)
	Spain	125 (0.8)
	Swaziland	1 (0.0)
	Switzerland	7 (0.0)
	Thailand	5 (0.0)
	Turkey	4 (0.0)
	United Arab Emirates	8 (0.1)
	United Kingdom	81 (0.5)
	Yemen	1 (0.0)
	(Missing)	14303 (96.6)
Country 2	Antigua and Barbuda	1 (0.0)
	Aruba	1 (0.0)

label	levels	all
	Australia	2 (0.0)
	Austria	4 (0.0)
	Barbados	1 (0.0)
	Bulgaria	1 (0.0)
	Canada	1 (0.0)
	Cyprus	2 (0.0)
	Czechia	1 (0.0)
	Egypt	2 (0.0)
	France	5 (0.0)
	Germany	2 (0.0)
	India	1 (0.0)
	Indonesia	1 (0.0)
	Italy	14 (0.1)
	Netherlands	1 (0.0)
	Portugal	1 (0.0)
	Qatar	1 (0.0)
	South Africa	1 (0.0)
	Spain	14 (0.1)
	Switzerland	1 (0.0)
	Thailand	1 (0.0)
	Turkey	3 (0.0)
	Vietnam	1 (0.0)
	(Missing)	14736 (99.6)
Animal, raw meat, insect bites 14 d prior	Yes	73 (0.5)
	No	3774 (25.5)
	Unknown	5401 (36.5)
	N/A	521 (3.5)

label	levels	all
	(Missing)	5030 (34.0)
Animal / insect	Bee Sting	1 (1.5)
	Bird (pet)	1 (1.5)
	bird (pigeon)	1 (1.5)
	Cat	1 (1.5)
	Cat (pet)	1 (1.5)
	Cat / Dog	1 (1.5)
	Cat, Dog (pets)	1 (1.5)
	cats	4 (5.9)
	Cats	3 (4.4)
	chicken & beef	1 (1.5)
	Chickens	1 (1.5)
	COWS	1 (1.5)
	cows, rabbits, pigs goats	1 (1.5)
	dog	3 (4.4)
	Dog	7 (10.3)
	DOG	2 (2.9)
	Dog Pet	1 (1.5)
	Dog, domestic animla living in their home.	1 (1.5)
	Dogs at home	1 (1.5)
	Domestic pet dog	1 (1.5)
	Domestic animal	1 (1.5)
	DOMESTIC ANIMAL	2 (2.9)
	domestic animal living in his home	1 (1.5)
	domestic animals	1 (1.5)
	Domestic Animals living in his/her home	1 (1.5)
	Domestic animals living in home	1 (1.5)

label	levels	all
	domestic dog	1 (1.5)
	Domestic pest (cats)	1 (1.5)
	Domestic Pet	2 (2.9)
	Domestic Pet (Dog)	4 (5.9)
	Domestic pet cat	1 (1.5)
	Domestic pet Dog	1 (1.5)
	Domestic pets	1 (1.5)
	Domestic Pets	2 (2.9)
	Domestic pets (dog)	1 (1.5)
	Domestic Pets Cat and Dog	1 (1.5)
	FARM ANIMALS - LAMBS	1 (1.5)
	Guinea Pig	1 (1.5)
	mosquito	1 (1.5)
	pet dog	1 (1.5)
	Pet dog	1 (1.5)
	Prepared raw chicken	1 (1.5)
	Raw Chicken	1 (1.5)
	Rodent	1 (1.5)
	Rodent - hamster,	1 (1.5)
	she has a cat	1 (1.5)
	Two cats	1 (1.5)
	unknown	1 (1.5)

Symptoms (detail)

Table 2

Stratified: all	all

Stratified: all		all
Total N (%)		14799 (100.0)
Fever	YES	6678 (45.1)
	NO	2442 (16.5)
	Unknown	531 (3.6)
	(Missing)	5148 (34.8)
Cough	YES	6770 (45.7)
	NO	2347 (15.9)
	Unknown	533 (3.6)
	(Missing)	5149 (34.8)
Cough (sputum)	YES	2115 (14.3)
	NO	5494 (37.1)
	Unknown	1911 (12.9)
	(Missing)	5279 (35.7)
Cough (blood)	YES	284 (1.9)
	NO	7079 (47.8)
	Unknown	2137 (14.4)
	(Missing)	5299 (35.8)
Sore throat	YES	799 (5.4)
	NO	5922 (40.0)
	Unknown	2768 (18.7)
	(Missing)	5310 (35.9)
Runny nose	YES	308 (2.1)
	NO	6252 (42.2)
	Unknown	2925 (19.8)
	(Missing)	5314 (35.9)
Ear pain	YES	47 (0.3)
	NO	6491 (43.9)

Stratified: all		all
	Unknown	2937 (19.8)
	(Missing)	5324 (36.0)
Wheeze	YES	864 (5.8)
	NO	6324 (42.7)
	Unknown	2286 (15.4)
	(Missing)	5325 (36.0)
Chest pain	YES	1156 (7.8)
	NO	6454 (43.6)
	Unknown	1891 (12.8)
	(Missing)	5298 (35.8)
Muscle ache	YES	1503 (10.2)
	NO	5385 (36.4)
	Unknown	2591 (17.5)
	(Missing)	5320 (35.9)
Joint pain	YES	528 (3.6)
	NO	6090 (41.2)
	Unknown	2845 (19.2)
	(Missing)	5336 (36.1)
Fatigue	YES	3329 (22.5)
	NO	3980 (26.9)
	Unknown	2185 (14.8)
	(Missing)	5305 (35.8)
Shortness of breath	YES	6226 (42.1)
	NO	2591 (17.5)
	Unknown	808 (5.5)
	(Missing)	5174 (35.0)
Lower chest wall indrawing	YES	117 (0.8)

Stratified: all		all
	NO	6131 (41.4)
	Unknown	3216 (21.7)
	(Missing)	5335 (36.0)
Headache	YES	965 (6.5)
	NO	5868 (39.7)
	Unknown	2641 (17.8)
	(Missing)	5325 (36.0)
Confusion	YES	2027 (13.7)
	NO	6044 (40.8)
	Unknown	1427 (9.6)
	(Missing)	5301 (35.8)
Seizures	YES	131 (0.9)
	NO	7486 (50.6)
	Unknown	1855 (12.5)
	(Missing)	5327 (36.0)
Abdominal pain	YES	752 (5.1)
	NO	6784 (45.8)
	Unknown	1943 (13.1)
	(Missing)	5320 (35.9)
Nausa/vomiting	YES	1581 (10.7)
	NO	6320 (42.7)
	Unknown	1591 (10.8)
	(Missing)	5307 (35.9)
Diarrhoea	YES	1620 (10.9)
	NO	6288 (42.5)
	Unknown	1595 (10.8)
	(Missing)	5296 (35.8)

Stratified: all		all
Conjunctivitis	YES	31 (0.2)
	NO	7021 (47.4)
	Unknown	2415 (16.3)
	(Missing)	5332 (36.0)
Skin rash	YES	136 (0.9)
	NO	7125 (48.1)
	Unknown	2215 (15.0)
	(Missing)	5323 (36.0)
Skin ulcers	YES	163 (1.1)
	NO	7093 (47.9)
	Unknown	2224 (15.0)
	(Missing)	5319 (35.9)
Lymphadenopathy	YES	56 (0.4)
	NO	7001 (47.3)
	Unknown	2408 (16.3)
	(Missing)	5334 (36.0)
Bleeding (Haemorrhage)	YES	76 (0.5)
	NO	7410 (50.1)
	Unknown	1980 (13.4)
	(Missing)	5333 (36.0)
If Bleeding (others)	YES	155 (1.0)
	NO	7151 (48.3)
	Unknown	2068 (14.0)
	(Missing)	5425 (36.7)

Comorbidity (detail)

Table 3

Stratified: all		all
Total N (%)		14799 (100.0)
Chronic cardiac disease	YES	2765 (18.7)
	NO	6544 (44.2)
	Unknown	418 (2.8)
	(Missing)	5072 (34.3)
Chronic pulmonary disease	YES	1661 (11.2)
	NO	7610 (51.4)
	Unknown	461 (3.1)
	(Missing)	5067 (34.2)
Asthma	YES	1352 (9.1)
	NO	7861 (53.1)
	Unknown	497 (3.4)
	(Missing)	5089 (34.4)
Chronic kidney disease	YES	1346 (9.1)
	NO	7835 (52.9)
	Unknown	505 (3.4)
	(Missing)	5113 (34.5)
Moderate/severe liver disease	YES	153 (1.0)
	NO	8961 (60.6)
	Unknown	577 (3.9)
	(Missing)	5108 (34.5)
Mild Liver disease	YES	144 (1.0)
	NO	8946 (60.5)
	Unknown	596 (4.0)
	(Missing)	5113 (34.5)
Chronic neurological disorder	YES	946 (6.4)
	NO	8165 (55.2)

Stratified: all		all
	Unknown	572 (3.9)
	(Missing)	5116 (34.6)
Malignancy	YES	890 (6.0)
	NO	8213 (55.5)
	Unknown	593 (4.0)
	(Missing)	5103 (34.5)
Chronic hematologic disease	YES	333 (2.3)
	NO	8749 (59.1)
	Unknown	595 (4.0)
	(Missing)	5122 (34.6)
AIDS/HIV	YES	46 (0.3)
	NO	9015 (60.9)
	Unknown	630 (4.3)
	(Missing)	5108 (34.5)
Obesity	YES	832 (5.6)
	NO	7623 (51.5)
	Unknown	1144 (7.7)
	(Missing)	5200 (35.1)
Diabetes with complications	YES	628 (4.2)
	NO	8569 (57.9)
	Unknown	502 (3.4)
	(Missing)	5100 (34.5)
Diabetes without complications	YES	1876 (12.7)
	NO	7373 (49.8)
	Unknown	466 (3.1)
	(Missing)	5084 (34.4)
Rheumatologic disorder	YES	856 (5.8)

Stratified: all		all
	NO	8205 (55.4)
	Unknown	603 (4.1)
	(Missing)	5135 (34.7)
Dementia	YES	1093 (7.4)
	NO	8034 (54.3)
	Unknown	556 (3.8)
	(Missing)	5116 (34.6)
Malnutrition	YES	187 (1.3)
	NO	8493 (57.4)
	Unknown	954 (6.4)
	(Missing)	5165 (34.9)
Smoking	YES	439 (3.0)
	NO	7038 (47.6)
	(Missing)	7322 (49.5)