

**Extended Data:**

**Extended data table 1:** Common post-acute sequelae of COVID-19; post-acute sequelae due to COVID-19 with excess burden greater than 10 per 1000 persons at 6-month are presented

**Extended data table 2:** Common post-acute sequelae of COVID-19 which required hospitalization; post-acute sequelae due to COVID-19 with excess burden greater than 10 per 1000 persons at 6-month are presented

**Extended Data figure legends:**

**Extended data figure 1a: Cohort flow for COVID-19 vs. users of the Veteran Health Administration**

**Extended data figure 1b: Cohort flow for hospitalized patients with COVID-19 vs. hospitalized patients with seasonal influenza**

**Extended data figure 2a: Study timeline for COVID-19 vs. users of the Veteran Health Administration**

**Extended data figure 2b: Study timeline for hospitalized patients with COVID-19 vs. hospitalized patients with seasonal influenza**

**Extended data Figure 3a: Risk of incident post-acute diagnoses in COVID-19.** All users of the Veteran Health Administration healthcare system served as the referent category. Outcomes were ascertained from day 30 after COVID-19 diagnosis until end of follow-up. Adjusted hazard ratios for incident diagnoses that are larger than one and P value less than  $6.57 \times 10^{-5}$  are presented. Diagnoses are grouped based on diagnosis groups and ordered based on hazard ratio from high to low within each diagnosis group. Hazard ratios (dots) and 95% confidence intervals (bars) are presented on log 10 scale.

**Extended data Figure 3b: Risk of incident post-acute medication use in COVID-19.** All users of the Veteran Health Administration healthcare system served as the referent category. Outcomes were ascertained from day 30 after COVID-19 diagnosis until end of follow-up. Adjusted hazard ratios for incident medications use that are larger than one and P value less than  $6.57 \times 10^{-5}$  are presented. Medications are grouped based on medication groups and ordered based on hazard ratio from high to low within each medication group. Hazard ratios (dots) and 95% confidence intervals (bars) are presented on log 10 scale.

**Extended data Figure 3c: Risk of incident post-acute laboratory abnormalities in COVID-19.** All users of the Veteran Health Administration healthcare system served as the referent category. Outcomes were ascertained from day 30 after COVID-19 diagnosis until end of follow-up. Adjusted hazard ratios for incident laboratory abnormalities that are larger than one and P value less than  $6.57 \times 10^{-5}$  are presented. Laboratory abnormalities are grouped based on higher or lower than the normal range and ordered based on hazard ratio from high to low within each group. Hazard ratios (dots) and 95% confidence intervals (bars) are presented on log 10 scale.

**Extended data Figure 4a: Risk of incident post-acute diagnoses in COVID-19 patients who had been hospitalized for COVID-19.** People who had been hospitalized with seasonal influenza served as the referent category. Outcomes were ascertained from day 30 after hospital admission until end of follow-up. Adjusted hazard ratios for incident diagnoses that are larger than one and P value less than  $6.57 \times 10^{-5}$  are presented. Diagnoses are grouped based on diagnosis groups and ordered based on hazard ratio from high to low within each diagnosis group. Hazard ratios (dots) and 95% confidence intervals (bars) are presented on log 10 scale.

**Extended data Figure 4b: Risk of incident post-acute medication use in patients with COVID-19 who had been hospitalized for COVID-19.** People who had been hospitalized with seasonal influenza served as the referent category. Outcomes were ascertained from day 30

after hospital admission until end of follow-up. Adjusted hazard ratios for incident medication use that are larger than one and P value less than  $6.57 \times 10^{-5}$  are presented. Medication use are grouped based on medication groups and ordered based on hazard ratio from high to low within each medication group. Hazard ratios (dots) and 95% confidence intervals (bars) are presented on log 10 scale.

**Extended data Figure 4c: Risk of incident post-acute laboratory abnormalities in patients with COVID-19 who had been hospitalized for COVID-19.** People who had been hospitalized with seasonal influenza served as the referent category. Outcomes were ascertained from day 30 after hospital admission until end of follow-up. Adjusted hazard ratios for incident laboratory abnormalities that are larger than one and P value less than  $6.57 \times 10^{-5}$  are presented. Laboratory abnormalities are grouped based on higher or lower than the normal range and ordered based on hazard ratio from high to low within each group. Hazard ratios (dots) and 95% confidence intervals (bars) are presented on log 10 scale.

**Extended data figure 5: Flowchart of the overall analytic approach**

**Extended data table 1: Common post-acute sequelae of COVID-19; post-acute sequelae due to COVID-19 with excess burden greater than 10 per 1000 persons at 6-month are presented**

Grouping	Outcomes	P value	Hazard Ratio (95% Confidence interval)	Excess burden per 1000 COVID-19 patients at 6-months (95% Confidence interval)
<b>Diagnoses</b>				
SYM	Respiratory signs and symptoms	$9.10 \times 10^{-131}$	2.25 (2.11, 2.41)	46.18 (43.63, 48.57)
SYM	Nervous system signs and symptoms	$3.62 \times 10^{-73}$	1.86 (1.74, 1.99)	31.39 (28.82, 33.81)
SYM	Malaise and fatigue	$1.80 \times 10^{-96}$	2.42 (2.23, 2.63)	27.22 (25.54, 28.77)
CIR	Hypertension	$1.60 \times 10^{-23}$	1.45 (1.34, 1.55)	26.50 (21.99, 30.72)
RSP	Respiratory failure; insufficiency; arrest	$3.00 \times 10^{-134}$	5.15 (4.52, 5.87)	24.73 (23.89, 25.47)
END	Disorders of lipid metabolism	$1.42 \times 10^{-17}$	1.31 (1.23, 1.39)	23.96 (18.96, 28.69)
NVS	Sleep wake disorders	$3.42 \times 10^{-27}$	1.43 (1.34, 1.53)	22.66 (19.09, 26.01)
END	Fluid and electrolyte disorders	$2.20 \times 10^{-62}$	2.10 (1.92, 2.29)	19.74 (18.08, 21.25)
INF	Bacterial infections	$1.12 \times 10^{-78}$	2.81 (2.52, 3.12)	18.87 (17.67, 19.95)
MUS	Muscle disorders	$7.77 \times 10^{-69}$	2.47 (2.23, 2.73)	18.55 (17.19, 19.77)
BLD	Anemia	$1.07 \times 10^{-56}$	2.08 (1.90, 2.28)	18.55 (16.91, 20.05)
CIR	Cardiac dysrhythmias	$1.50 \times 10^{-57}$	2.26 (2.04, 2.50)	17.53 (16.05, 18.86)
DIG	Esophageal disorders	$7.28 \times 10^{-24}$	1.44 (1.34, 1.55)	16.69 (13.88, 19.32)
MBD	Trauma- and stressor-related disorders	$3.35 \times 10^{-24}$	1.50 (1.39, 1.62)	16.45 (13.75, 18.95)
MUS	Musculoskeletal pain, not low back pain	$1.82 \times 10^{-09}$	1.19 (1.12, 1.25)	15.70 (10.85, 20.32)
GEN	Acute renal failure	$3.42 \times 10^{-62}$	2.61 (2.33, 2.93)	15.55 (14.39, 16.59)
SYM	Circulatory signs and symptoms	$6.31 \times 10^{-38}$	1.77 (1.62, 1.93)	15.23 (13.43, 16.90)
CIR	Chest pain	$2.23 \times 10^{-37}$	1.80 (1.64, 1.97)	14.94 (13.16, 16.56)
NVS	Other specified nervous system disorders	$1.17 \times 10^{-40}$	1.99 (1.80, 2.21)	14.08 (12.56, 15.45)
DIG	Gastrointestinal disorders	$1.45 \times 10^{-33}$	1.73 (1.58, 1.89)	14.07 (12.26, 15.72)
END	Diabetes mellitus	$1.91 \times 10^{-23}$	1.60 (1.46, 1.75)	14.00 (11.73, 16.07)
END	Obesity	$2.43 \times 10^{-20}$	1.48 (1.36, 1.61)	13.04 (10.67, 15.22)
SYM	Dysphagia	$7.71 \times 10^{-47}$	2.32 (2.07, 2.60)	12.77 (11.59, 13.83)
GEN	Urinary tract infections	$2.68 \times 10^{-42}$	2.19 (1.96, 2.46)	12.54 (11.27, 13.67)
MBD	Depressive disorders	$6.57 \times 10^{-14}$	1.33 (1.24, 1.43)	12.40 (9.48, 15.12)
SYM	Abdominal pain and other digestive/abdomen signs and symptoms	$1.03 \times 10^{-17}$	1.39 (1.29, 1.49)	12.22 (9.75, 14.51)
NVS	Neurocognitive disorders	$1.23 \times 10^{-43}$	2.51 (2.21, 2.86)	11.87 (10.77, 12.84)

RSP	Lower respiratory disease	$6.11 \times 10^{-53}$	3.03 (2.63, 3.49)	11.68 (10.80, 12.44)
INF	Septicemia	$2.79 \times 10^{-56}$	3.63 (3.09, 4.26)	11.48 (10.72, 12.13)
CIR	Coronary atherosclerosis and other heart disease	$3.94 \times 10^{-24}$	1.67 (1.51, 1.84)	11.37 (9.59, 12.99)
CIR	Heart failure	$3.47 \times 10^{-36}$	2.13 (1.89, 2.39)	11.22 (9.97, 12.34)
MBD	Anxiety and fear-related disorders	$3.85 \times 10^{-15}$	1.38 (1.27, 1.49)	10.69 (8.33, 12.88)
SYM	Genitourinary signs and symptoms	$2.81 \times 10^{-20}$	1.55 (1.41, 1.70)	10.03 (8.25, 11.67)

#### Medication use

CN	Non-opioid analgesics	$3.26 \times 10^{-97}$	2.02 (1.89, 2.15)	45.07 (41.99, 47.96)
BL	Anticoagulants	$1.20 \times 10^{-169}$	2.98 (2.76, 3.22)	44.31 (42.48, 46.01)
RE	Bronchodilators, sympathomimetic, inhalation	$1.70 \times 10^{-128}$	2.84 (2.61, 3.09)	36.26 (34.48, 37.89)
GA	Hyperosmotic laxatives	$5.75 \times 10^{-65}$	1.78 (1.67, 1.91)	28.87 (26.30, 31.29)
GA	Gastric medications	$8.71 \times 10^{-49}$	1.74 (1.61, 1.87)	26.70 (23.90, 29.32)
RE	Non-opioid-containing antitussives/expectorants	$6.84 \times 10^{-84}$	2.76 (2.49, 3.06)	22.71 (21.30, 23.98)
GA	Stimulant laxatives	$1.62 \times 10^{-57}$	1.89 (1.74, 2.04)	22.27 (20.22, 24.18)
CV	Beta blockers/related	$1.97 \times 10^{-50}$	2.08 (1.89, 2.29)	20.42 (18.49, 22.17)
CV	Antilipemic agents	$2.35 \times 10^{-21}$	1.52 (1.40, 1.66)	19.14 (15.79, 22.23)
CN	Opioid analgesics	$8.28 \times 10^{-32}$	1.53 (1.43, 1.64)	19.01 (16.35, 21.49)
CN	Antidepressants	$3.27 \times 10^{-24}$	1.51 (1.39, 1.63)	18.36 (15.35, 21.16)
RE	Antiasthma	$1.40 \times 10^{-57}$	2.43 (2.18, 2.70)	17.08 (15.69, 18.32)
CV	Calcium channel blockers	$6.45 \times 10^{-40}$	1.99 (1.79, 2.20)	16.69 (14.86, 18.34)
HS	Insulin	$1.02 \times 10^{-58}$	2.66 (2.36, 2.99)	16.19 (14.95, 17.29)
VT	Vitamin D	$1.21 \times 10^{-22}$	1.45 (1.35, 1.57)	16.10 (13.32, 18.69)
TN	Potassium	$4.57 \times 10^{-47}$	2.02 (1.84, 2.23)	15.95 (14.37, 17.39)
HS	Glucocorticoids	$4.66 \times 10^{-26}$	1.51 (1.40, 1.63)	14.87 (12.54, 17.03)
CV	Alpha blockers/related	$4.29 \times 10^{-27}$	1.65 (1.50, 1.80)	14.55 (12.40, 16.52)
GA	Stool softener	$6.44 \times 10^{-41}$	1.95 (1.77, 2.14)	14.39 (12.83, 15.82)
VT	Vitamin C	$1.34 \times 10^{-64}$	3.44 (2.98, 3.97)	13.67 (12.81, 14.42)
CV	Loop diuretics	$9.84 \times 10^{-44}$	2.21 (1.98, 2.48)	13.57 (12.24, 14.77)
DE	Antifungal, topical	$6.79 \times 10^{-24}$	1.57 (1.43, 1.71)	12.44 (10.43, 14.29)
DE	Anti-inflammatory, topical	$9.88 \times 10^{-11}$	1.23 (1.16, 1.31)	12.35 (8.86, 15.63)
MS	Nonsalicylate NSAIDs, antirheumatic	$2.13 \times 10^{-09}$	1.24 (1.15, 1.33)	11.45 (7.95, 14.72)
CN	Anticonvulsants	$1.47 \times 10^{-14}$	1.39 (1.28, 1.51)	11.01 (8.53, 13.30)
AH	Antihistamines	$2.34 \times 10^{-17}$	1.46 (1.34, 1.59)	10.99 (8.79, 13.00)
CN	Benzodiazepine derivative sedatives/hypnotics	$1.46 \times 10^{-28}$	1.82 (1.64, 2.03)	10.76 (9.29, 12.08)

TN	Magnesium	$1.04 \times 10^{-32}$	2.00 (1.79, 2.25)	10.76 (9.45, 11.92)
<b>Laboratory abnormalities</b>				
Low	Hematocrit	$6.28 \times 10^{-98}$	1.85 (1.75, 1.96)	53.25 (49.45, 56.86)
Low	Hemoglobin	$3.40 \times 10^{-100}$	1.92 (1.80, 2.03)	51.35 (47.80, 54.72)
Low	Serum albumin	$2.55 \times 10^{-75}$	2.12 (1.95, 2.29)	24.63 (22.77, 26.35)
High	Serum chloride	$1.11 \times 10^{-31}$	1.53 (1.42, 1.64)	18.39 (15.81, 20.80)
Low	Serum potassium	$3.43 \times 10^{-38}$	1.77 (1.62, 1.93)	15.41 (13.59, 17.09)
Low	Serum calcium	$1.25 \times 10^{-39}$	1.80 (1.65, 1.97)	15.37 (13.61, 17.00)
High	Total white blood cell count	$6.68 \times 10^{-29}$	1.57 (1.45, 1.70)	14.66 (12.52, 16.64)
Low	Total white blood cell count	$1.23 \times 10^{-23}$	1.49 (1.38, 1.61)	14.25 (11.87, 16.45)
High	Alanine aminotransferase	$3.22 \times 10^{-19}$	1.38 (1.28, 1.48)	13.99 (11.28, 16.52)
Low	Carbon dioxide	$2.57 \times 10^{-27}$	1.56 (1.44, 1.69)	13.88 (11.79, 15.82)
High	Blood urea nitrogen	$4.40 \times 10^{-25}$	1.56 (1.44, 1.70)	13.24 (11.15, 15.16)
Low	Serum sodium	$3.71 \times 10^{-17}$	1.35 (1.26, 1.44)	13.04 (10.33, 15.58)
Low	Serum total protein	$2.75 \times 10^{-38}$	2.20 (1.95, 2.47)	10.97 (9.80, 12.00)
High	International Normalized Ratio	$1.53 \times 10^{-37}$	2.20 (1.95, 2.48)	10.96 (9.78, 12.00)
High	Triglycerides	$3.01 \times 10^{-07}$	1.17 (1.10, 1.24)	10.51 (6.67, 14.14)
High	Prothrombin time	$1.41 \times 10^{-35}$	2.15 (1.91, 2.43)	10.51 (9.33, 11.55)

Diagnosis group: BLD=Diseases of the Blood and Blood Forming Organs and Certain Disorders Involving the Immune Mechanism; CIR=Diseases of the Circulatory System; DIG=Diseases of the Digestive System; END=Endocrine, Nutritional and Metabolic Diseases; GEN=Diseases of the Genitourinary System; INF=Certain Infectious and Parasitic Diseases; MBD=Mental, Behavioral and Neurodevelopmental Disorders; MUS=Diseases of the Musculoskeletal System and Connective Tissue; NVS=Diseases of the Nervous System; RSP=Diseases of the Respiratory System; SYM=Symptoms, Signs and Abnormal Clinical and Laboratory Findings, Not Elsewhere Classified.

Medication group: AH=Antihistamines; BL=Blood Products/Modifiers/Volume Expanders; CN=Central Nervous System Medications; CV=Cardiovascular Medications; DE=Dermatological Agents; GA=Gastrointestinal Medications; HS=Hormones/Synthetics/Modifiers; MS=Musculoskeletal Medications; RE=Respiratory Tract Medications; TN=Therapeutic Nutrients/Minerals/Electrolytes; VT=Vitamins.

Hazard ratio, burden and P value of common post-acute sequelae of COVID-19 in people with COVID-19 compared to users of the Veterans Health Administration (VHA). All users of the VHA served as the referent category. Results based on survival models adjusted through overlap weighting. Outcomes were ascertained from day 30 after COVID-19 diagnosis until end of follow-up. Outcomes selected based on hazard ratio larger than one, P value less than  $6.57 \times 10^{-5}$  and excess burden larger than 10 per 1000 COVID-19 patients at 6-months. Within each domain, outcomes are ranked based on excess burden from high to low.

**Extended data table 2: Common post-acute sequelae of COVID-19 which required hospitalization; post-acute sequelae due to COVID-19 with excess burden greater than 10 per 1000 persons at 6-month are presented**

Grouping	Outcomes	P value	Hazard Ratio (95% Confidence interval)	Excess burden per 1000 hospitalized COVID-19 patients at 180 days (95% Confidence interval)
<b>Diagnoses</b>				
RSP	Respiratory failure; insufficiency; arrest	$3.67 \times 10^{-65}$	2.39 (2.16, 2.65)	74.79 (68.91, 80.15)
END	Fluid and electrolyte disorders	$2.00 \times 10^{-21}$	1.58 (1.44, 1.74)	52.52 (43.35, 60.94)
SYM	Malaise and fatigue	$4.12 \times 10^{-17}$	1.54 (1.39, 1.70)	44.30 (35.44, 52.39)
END	Disorders of lipid metabolism	$1.09 \times 10^{-06}$	1.32 (1.18, 1.47)	43.17 (26.97, 57.93)
GEN	Acute renal failure	$7.27 \times 10^{-16}$	1.56 (1.40, 1.74)	36.59 (29.01, 43.45)
SYM	Nervous system signs and symptoms	$9.76 \times 10^{-08}$	1.30 (1.18, 1.43)	35.09 (23.09, 46.14)
INF	Bacterial infections	$6.83 \times 10^{-12}$	1.43 (1.29, 1.59)	33.73 (25.19, 41.52)
MUS	Muscle disorders	$5.68 \times 10^{-10}$	1.42 (1.27, 1.59)	28.81 (20.68, 36.15)
BLD	Anemia	$4.32 \times 10^{-08}$	1.36 (1.22, 1.51)	28.09 (18.91, 36.41)
INF	Septicemia	$8.99 \times 10^{-16}$	1.74 (1.52, 2.00)	27.82 (22.33, 32.64)
GEN	Urinary tract infections	$1.05 \times 10^{-13}$	1.65 (1.44, 1.88)	26.97 (21.04, 32.20)
NVS	Other specified nervous system disorders	$7.20 \times 10^{-10}$	1.49 (1.31, 1.69)	25.77 (18.59, 32.14)
END	Malnutrition	$9.07 \times 10^{-17}$	1.93 (1.65, 2.25)	24.65 (20.16, 28.52)
SYM	Dysphagia	$1.68 \times 10^{-09}$	1.45 (1.28, 1.63)	23.65 (16.83, 29.73)
NVS	Neurocognitive disorders	$2.11 \times 10^{-09}$	1.58 (1.36, 1.83)	22.83 (16.42, 28.39)
END	Nutritional and metabolic disorders	$3.65 \times 10^{-09}$	1.48 (1.30, 1.69)	22.68 (16.05, 28.53)
SYM	Shock	$4.43 \times 10^{-23}$	3.06 (2.45, 3.82)	21.59 (18.97, 23.70)
SKN	Pressure ulcer of skin	$8.70 \times 10^{-12}$	1.73 (1.48, 2.03)	20.45 (15.64, 24.57)
CIR	Hypotension	$1.49 \times 10^{-07}$	1.43 (1.25, 1.64)	19.09 (12.71, 24.70)
DIG	Gastrointestinal disorders	$2.88 \times 10^{-05}$	1.29 (1.14, 1.45)	18.31 (10.26, 25.52)
SYM	Circulatory signs and symptoms	$3.50 \times 10^{-05}$	1.29 (1.15, 1.46)	17.80 (9.90, 24.85)
RSP	Lower respiratory disease	$4.57 \times 10^{-07}$	1.44 (1.25, 1.67)	16.79 (10.96, 21.88)
MBD	Anxiety and fear-related disorders	$1.83 \times 10^{-05}$	1.37 (1.19, 1.59)	15.72 (9.11, 21.48)
CIR	Acute pulmonary embolism	$1.15 \times 10^{-14}$	2.57 (2.02, 3.26)	15.33 (12.67, 17.43)
BLD	Coagulation and hemorrhagic disorders	$1.36 \times 10^{-07}$	1.58 (1.33, 1.87)	14.25 (9.67, 18.13)
RSP	Postprocedural or postoperative respiratory system complication	$1.21 \times 10^{-19}$	5.07 (3.57, 7.21)	12.02 (10.77, 12.90)
CIR	Acute phlebitis; thrombophlebitis and thromboembolism	$2.57 \times 10^{-07}$	1.71 (1.39, 2.09)	11.88 (8.08, 15.00)

Medication use				
BL	Anticoagulants	$3.43 \times 10^{-25}$	1.55 (1.43, 1.68)	81.04 (67.76, 93.46)
CN	Non-opioid analgesics	$3.37 \times 10^{-8}$	1.31 (1.19, 1.44)	55.26 (36.87, 72.35)
GA	Hyperosmotic laxatives	$7.33 \times 10^{-15}$	1.43 (1.31, 1.57)	50.65 (39.29, 61.16)
GA	Stimulant laxatives	$2.70 \times 10^{-16}$	1.50 (1.36, 1.65)	47.02 (37.22, 56.01)
DE	Local anesthetics, topical	$4.47 \times 10^{-11}$	1.51 (1.33, 1.70)	29.44 (21.81, 36.25)
VT	Vitamin C	$2.84 \times 10^{-30}$	3.04 (2.51, 3.68)	28.78 (25.78, 31.27)
IM	Vaccines	$8.32 \times 10^{-21}$	2.04 (1.76, 2.37)	27.67 (23.33, 31.42)
HS	Insulin	$2.05 \times 10^{-8}$	1.44 (1.27, 1.64)	26.10 (17.96, 33.33)
TN	Potassium	$3.07 \times 10^{-6}$	1.29 (1.16, 1.44)	23.95 (14.56, 32.47)
TN	Zinc	$4.18 \times 10^{-35}$	8.52 (6.07, 11.96)	22.78 (21.54, 23.66)
CN	Benzodiazepine derivative sedatives/hypnotics	$9.54 \times 10^{-9}$	1.48 (1.29, 1.69)	21.57 (15.08, 27.29)
DE	Antifungal, topical	$3.78 \times 10^{-6}$	1.34 (1.18, 1.52)	19.97 (12.16, 26.93)
CN	Antipsychotics	$1.41 \times 10^{-8}$	1.57 (1.34, 1.83)	18.59 (13.04, 23.36)
DE	Dermatologicals, topical	$9.50 \times 10^{-7}$	1.44 (1.24, 1.66)	16.82 (10.78, 22.07)
RS	Laxatives, rectal	$2.63 \times 10^{-5}$	1.39 (1.19, 1.61)	12.88 (7.37, 17.64)
OR	Mouthwashes	$4.10 \times 10^{-7}$	1.57 (1.32, 1.87)	12.71 (8.44, 16.31)
VT	Thiamine	$3.92 \times 10^{-5}$	1.53 (1.25, 1.88)	10.15 (5.84, 13.69)
Laboratory abnormalities				
Low	Hemoglobin	$2.80 \times 10^{-6}$	1.28 (1.16, 1.42)	48.56 (29.34, 66.28)
Low	Hematocrit	$1.14 \times 10^{-5}$	1.26 (1.13, 1.39)	48.04 (27.56, 67.01)
Low	Serum albumin	$1.18 \times 10^{-12}$	1.42 (1.29, 1.56)	45.03 (33.92, 55.24)
Low	Serum total protein	$2.02 \times 10^{-19}$	1.81 (1.59, 2.06)	33.39 (27.63, 38.49)
High	Alanine aminotransferase	$2.18 \times 10^{-8}$	1.42 (1.25, 1.60)	25.70 (17.62, 32.91)
High	Platelet count	$2.22 \times 10^{-16}$	1.94 (1.65, 2.26)	24.31 (19.85, 28.15)
Low	Serum calcium	$3.03 \times 10^{-5}$	1.26 (1.13, 1.41)	22.33 (12.41, 31.31)
Low	Serum potassium	$5.16 \times 10^{-6}$	1.31 (1.17, 1.47)	21.79 (13.08, 29.62)
High	High-sensitivity C-reactive protein	$9.99 \times 10^{-16}$	2.15 (1.78, 2.59)	20.60 (16.89, 23.69)
High	Ferritin	$2.04 \times 10^{-9}$	1.72 (1.44, 2.05)	16.76 (12.21, 20.58)
High	Total cholesterol	$4.97 \times 10^{-5}$	1.40 (1.19, 1.65)	13.25 (7.38, 18.27)
High	Serum phosphate	$1.17 \times 10^{-5}$	1.47 (1.24, 1.74)	12.22 (7.31, 16.38)
High	Serum sodium	$3.99 \times 10^{-6}$	1.49 (1.26, 1.77)	11.83 (7.35, 15.62)
High	C-reactive protein	$7.76 \times 10^{-7}$	1.67 (1.37, 2.05)	10.78 (7.14, 13.76)

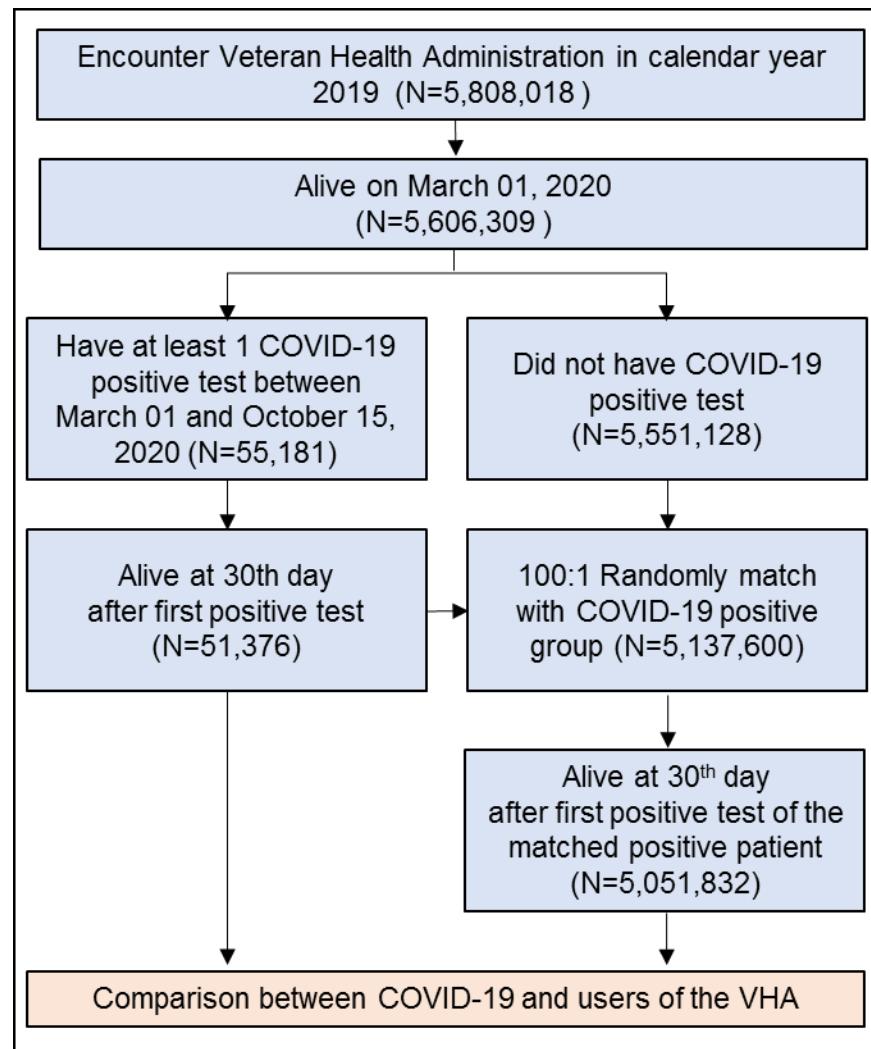
Diagnosis group: BLD=Diseases of the Blood and Blood Forming Organs and Certain Disorders Involving the Immune Mechanism; CIR=Diseases of the Circulatory System; DIG=Diseases of the Digestive System; END=Endocrine, Nutritional and Metabolic Diseases; GEN=Diseases of the

Genitourinary System; INF=Certain Infectious and Parasitic Diseases; MBD=Mental, Behavioral and Neurodevelopmental Disorders; MUS=Diseases of the Musculoskeletal System and Connective Tissue; NVS=Diseases of the Nervous System; RSP=Diseases of the Respiratory System; SKN=Diseases of the Skin and Subcutaneous Tissue; SYM=Symptoms, Signs and Abnormal Clinical and Laboratory Findings, Not Elsewhere Classified.

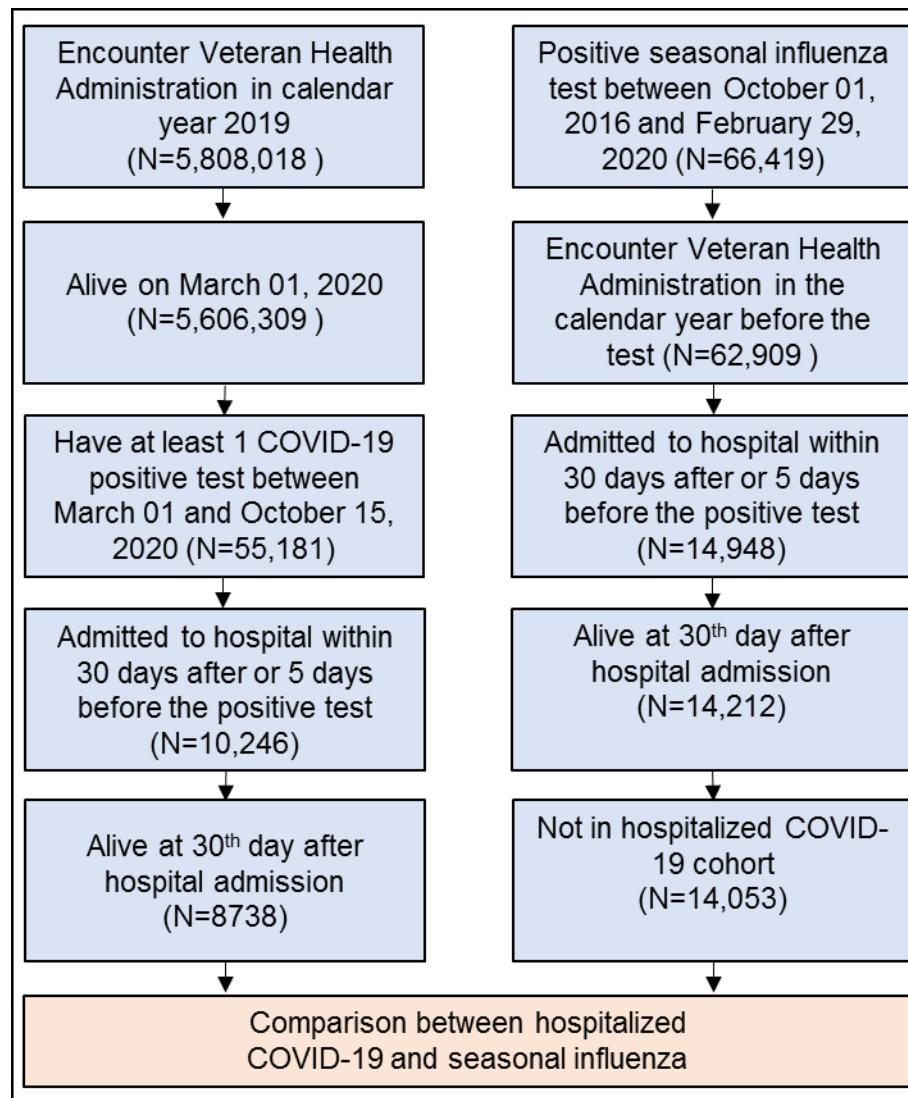
Medication group: BL=Blood Products/Modifiers/Volume Expanders; CN=Central Nervous System Medications; DE=Dermatological Agents; GA=Gastrointestinal Medications; HS=Hormones/Synthetics/Modifiers; IM=Immunological Agents; OR=Dental and Oral Agents, Topical; RS=Rectal, Local; TN=Therapeutic Nutrients/Minerals/Electrolytes; VT=Vitamins.

Hazard ratio, burden and P value of common post-acute sequelae of COVID-19 which require hospitalization in people who had been hospitalized with COVID-19 compared to people who had been hospitalized with seasonal influenza. People who had been hospitalized with seasonal influenza served as the referent category. Results based on survival models adjusted through overlap weighting. Outcomes were ascertained from day 30 after hospital admission until end of follow-up. Outcomes selected based on hazard ratio larger than one, P value less than  $6.57 \times 10^{-5}$  and excess burden larger than 10 per 1000 COVID-19 patients at 6-months. Within each domain, outcomes are ranked based on excess burden from high to low.

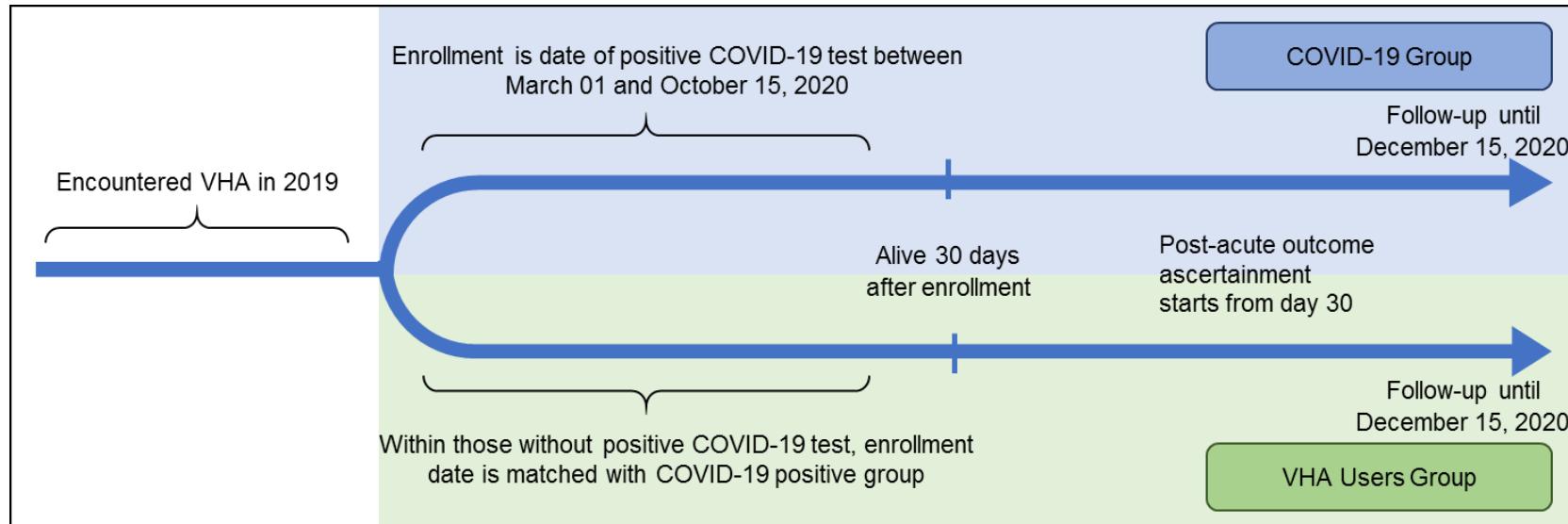
Extended data figure 1a: Cohort flow for COVID-19 vs. users of the Veteran Health Administration



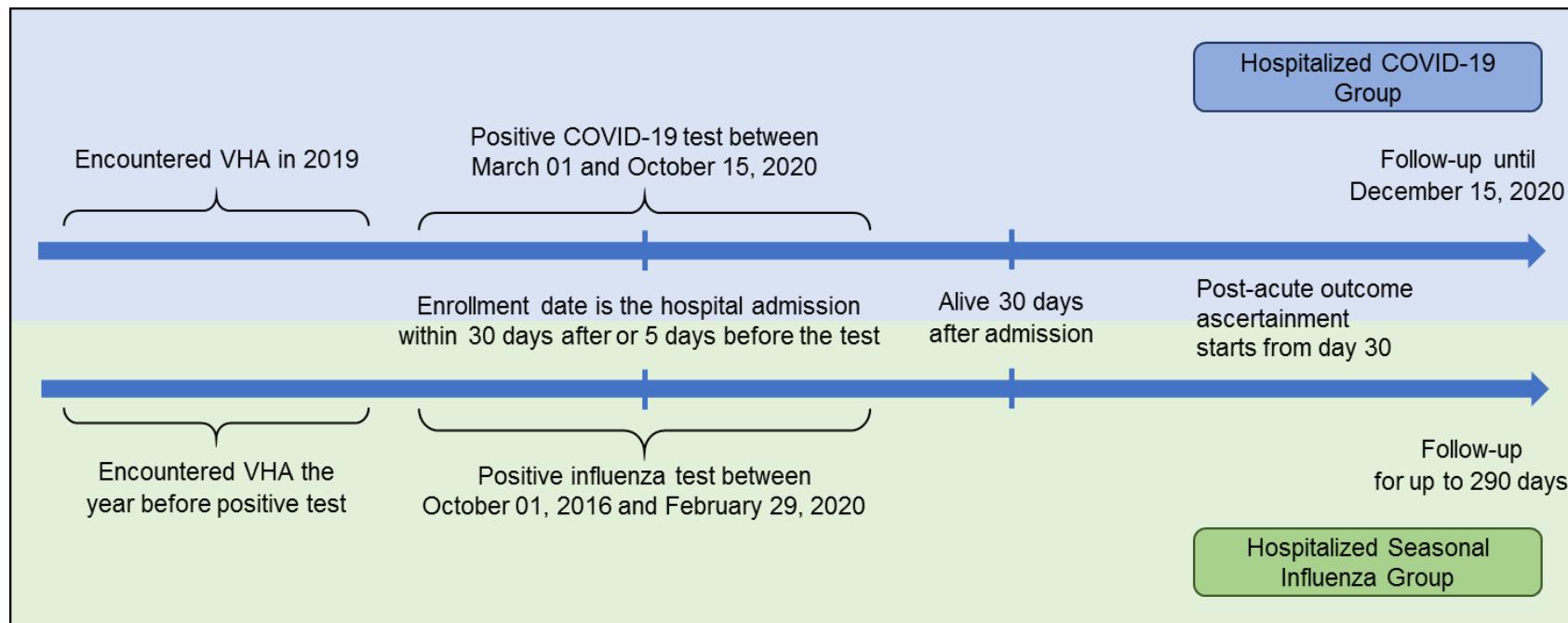
Extended data figure 1b: Cohort flow for hospitalized patients with COVID-19 vs. hospitalized patients with seasonal influenza



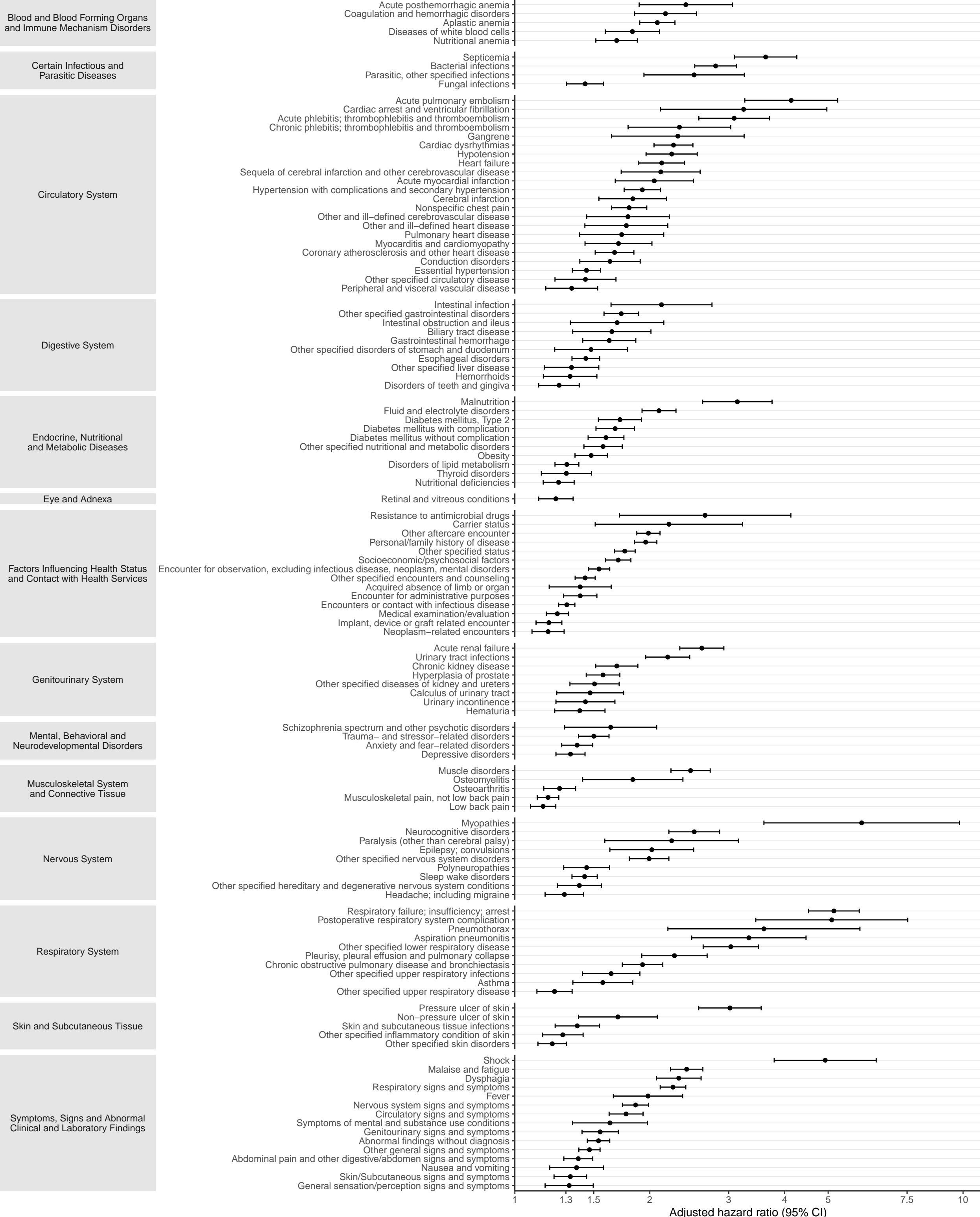
### Extended data figure 2a: Study timeline for COVID-19 vs. users of the Veteran Health Administration



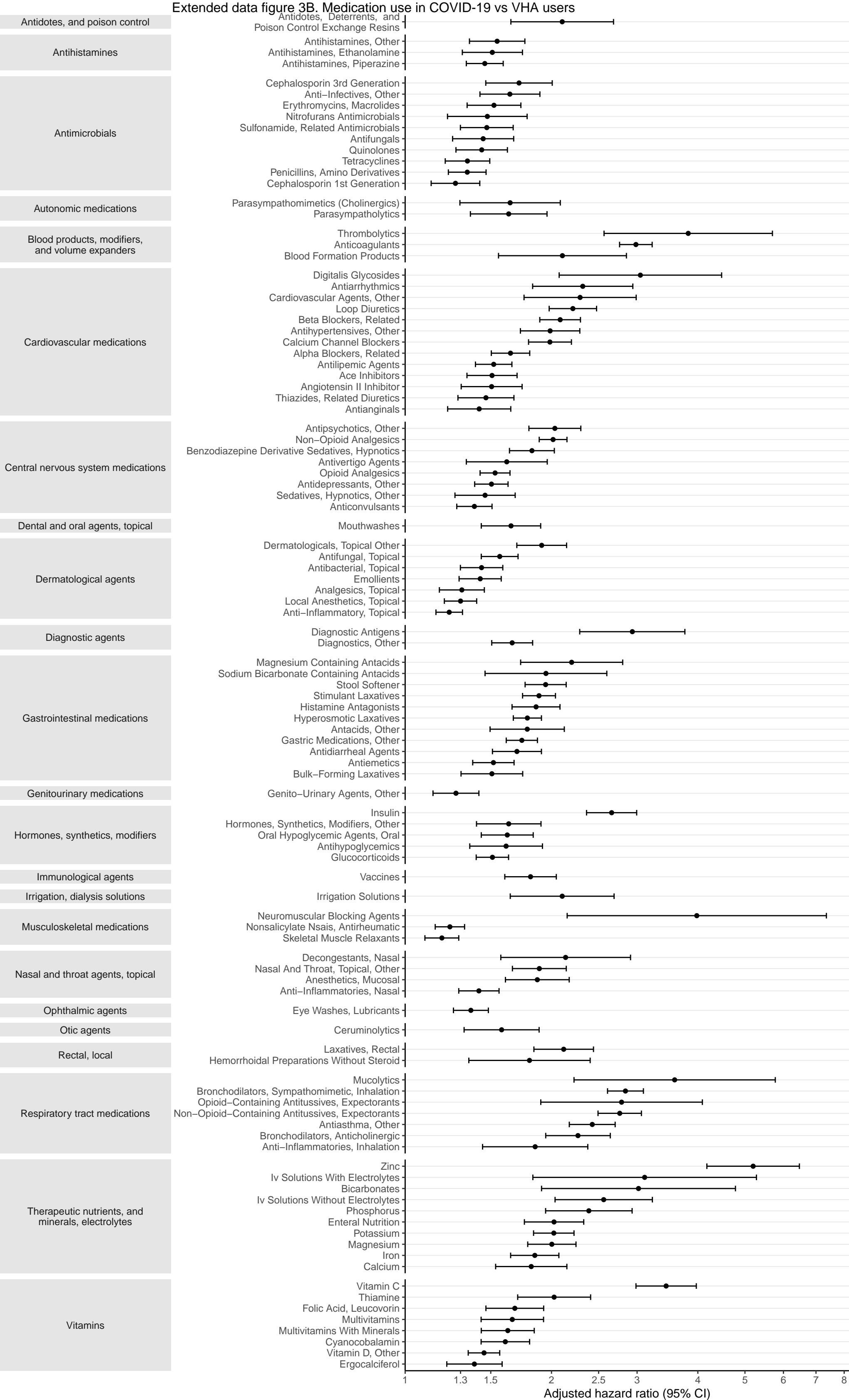
### Extended data figure 2b: Study timeline for hospitalized patients with COVID-19 vs. hospitalized patients with seasonal influenza



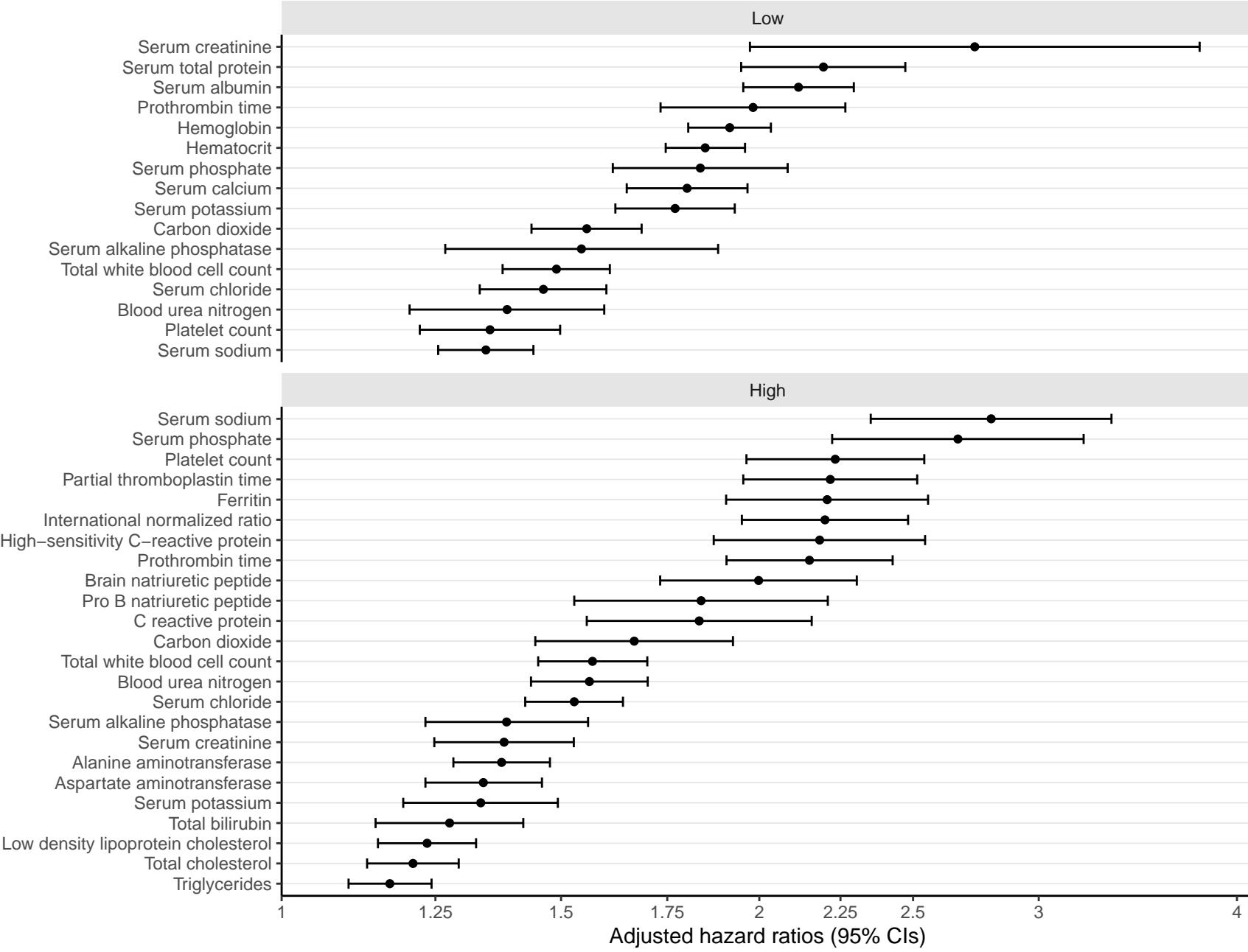
Extended data figure 3A. Diagnoses in COVID-19 vs. VHA users



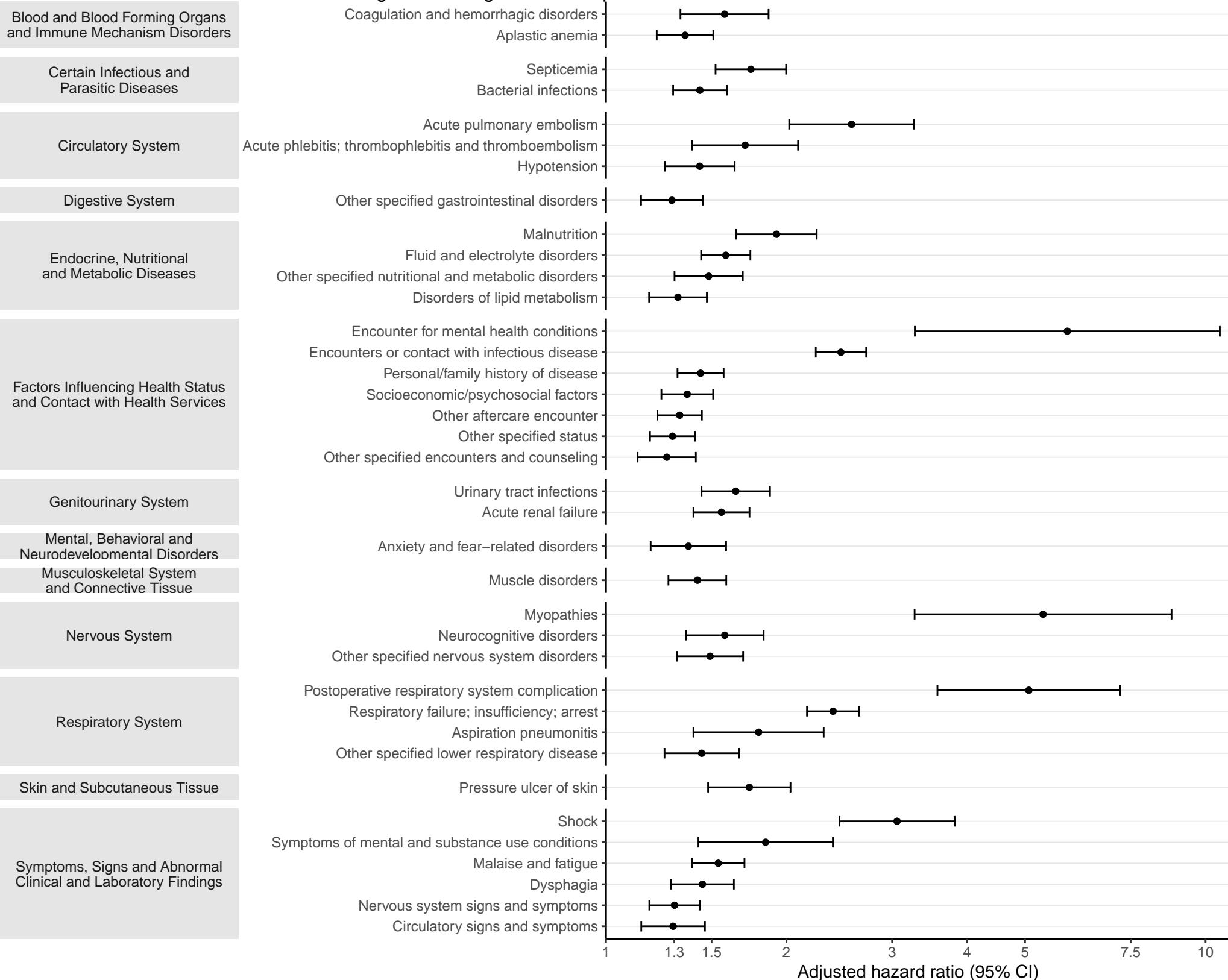
### Extended data figure 3B. Medication use in COVID-19 vs VHA users



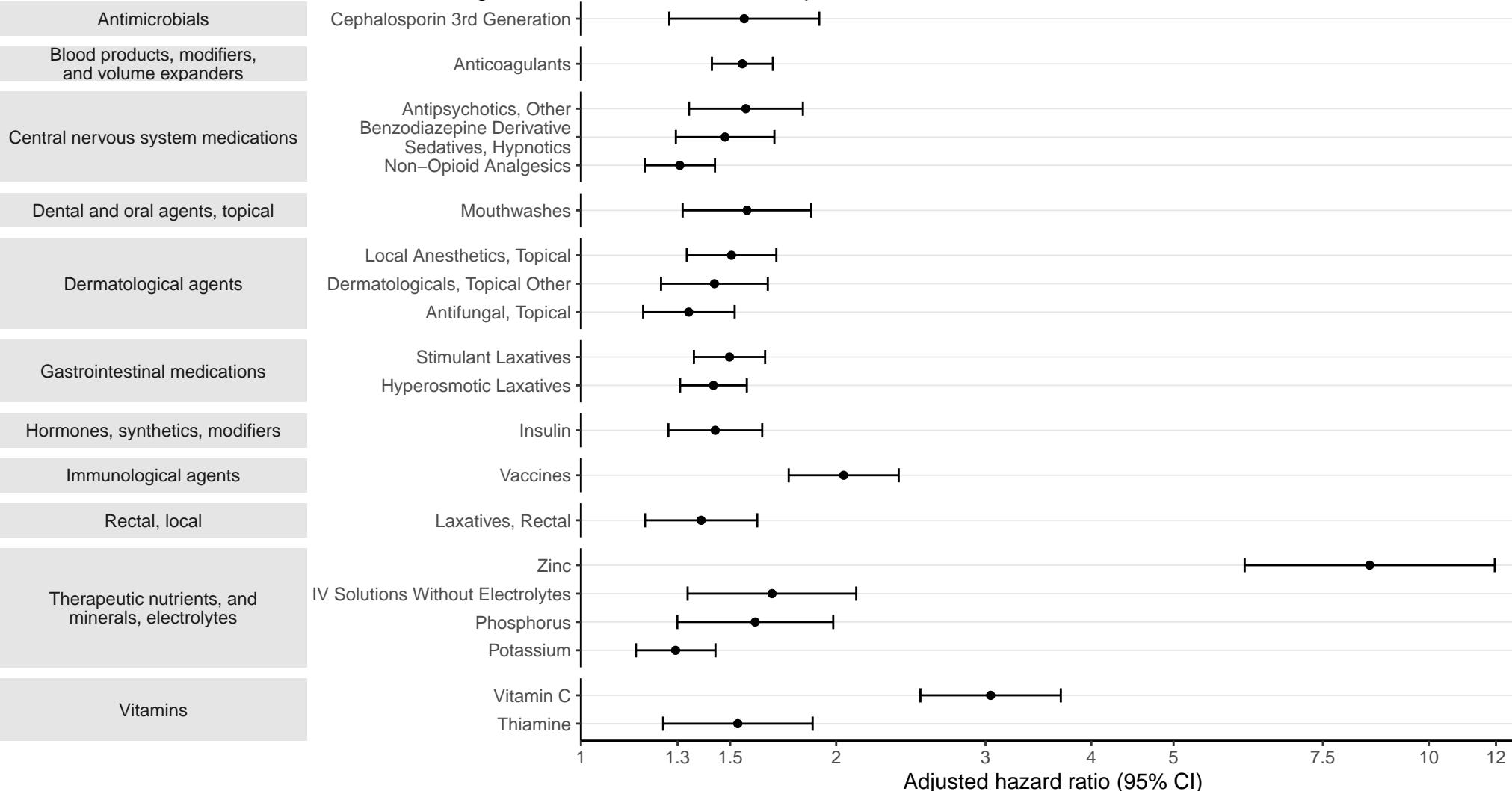
Extended data figure 3C. Laboratory abnormalities in COVID-19 vs. VHA users



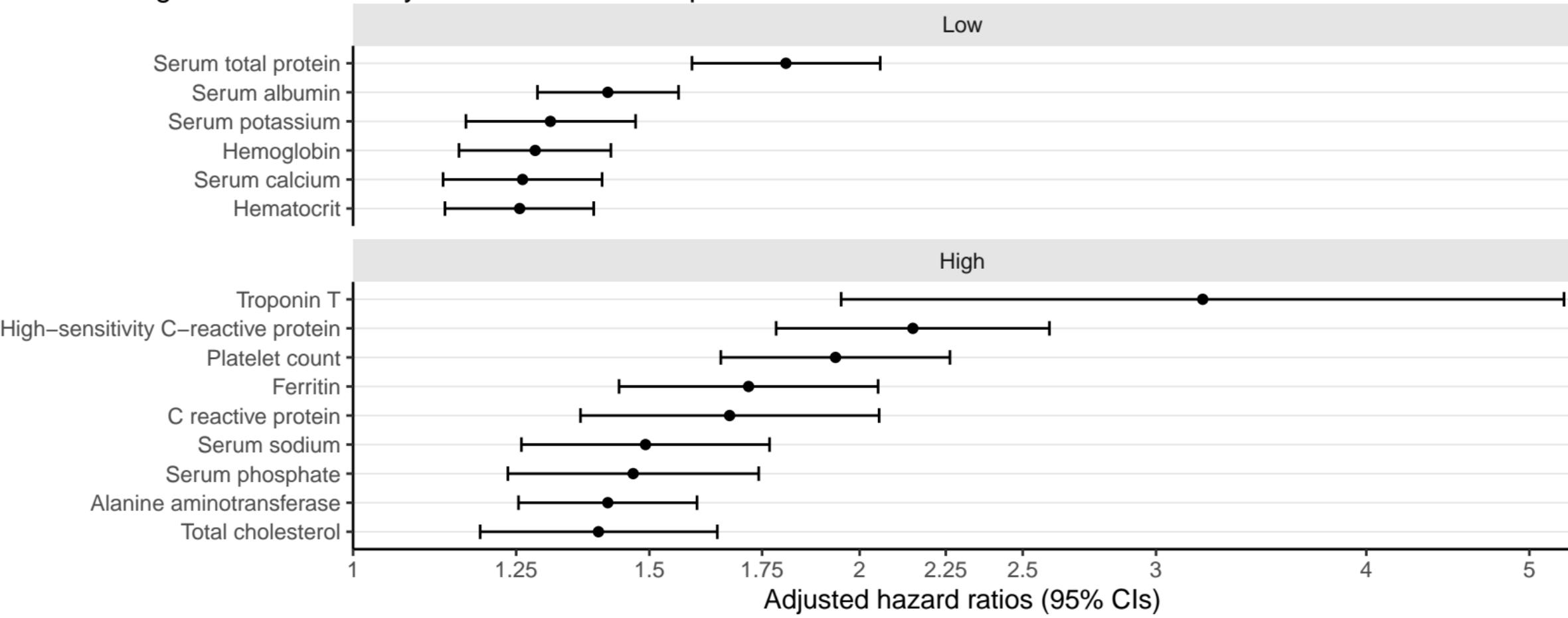
## Extended data figure 4A. Diagnoses in hospitalized COVID-19 vs. influenza



## Extended data figure 4B. Medication use in hospitalized COVID-19 vs. influenza



Extended figure 4C. Laboratory abnormalities in hospitalized COVID-19 vs. influenza



Extended data figure 5: Flowchart of the overall analytic approach

