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## **Other symptoms and comorbidities**

<sup>5</sup>Other symptoms: Gastrointestinal-diarrhea (175), anorexia (66), vomiting (64), abdominal pain (29), nausea (12), abdominal distension (3), hematemesis/malena (2), poor oral intake (3), epigastric pain (2), difficulty in food intake/dysphagia (2), hiccoughs (2), loss of bowel control (1), black stool (1), acid-peptic disease (1), dry mouth (1), and oral ulcer (1), Neurological- altered sensorium (41), drowsiness/giddiness (41), altered/loss of taste (14), loss of smell (6), loss of consciousness (1), blurring of vision (2), hydrocephalus (1), slurred speech (1), dysphasia (1), angle of mouth deviation (1), pain in eye (1), disorientation (1), decreased vision (1), Others- myalgia (179), fatigue (86), chest pain (37), headache (28), polyuria (3), swelling of limbs (4), anasarca (2), pedal edema (2), chills (2), erythematous discoloration of legs (2), burning micturition (1), reduced urine output (1), dysuria (1), loss of bladder control (1), stress incontinence (1), urge incontinence (1), yellow discoloration of urine (1), scrotal swelling (1), low back pain (1), pain and swelling over hip (1), lethargy (1), tremors (1) ear ache (1), ear blockage (1), body rashes (1), rigor (1), orthopnea (1), joint pain (1), and bleeding manifestations (1).

<sup>6</sup> Comorbidity data was not available for 27 cases

<sup>7</sup>Other endocrine diseases: hypothyroidism (415), hyperglycemia (17), polycystic ovarian syndrome (2), vitamin D deficiency (2), hyperglycemic hyperosmolar syndrome (1), Addison's disease (1), hyperthyroidism (1), exogenous Cushing's Syndrome (1), panhypopituitarism (1), non-functioning pituitary adenoma (1), hyperparathyroidism (1), and hypoparathyroidism (1).

<sup>8</sup>Other CVS diseases: dyslipidemia (57), rheumatic heart disease (37), left ventricular dysfunction (26), congestive cardiac failure (29), atrial fibrillation (22), dilated cardiomyopathy (19), deep vein thrombosis (10), mitral stenosis (11), left ventricular failure (7), peripheral vascular disease (8), aortic stenosis (6), complete heart block (5), supraventricular tachycardia (5), myocarditis (5), unstable angina (4), atrial septal defect (4), arrhythmia (3), mitral regurgitation (3), hyperlipidemia (3), left ventricular hypertrophy (2), cardiac failure-not specified (2), mitral valve prolapse (2), varicose veins (2), post arteriovenous malformation (2), aortic regurgitation (2), postpartum cardiomyopathy (2), patent foramen ovale (1), tricuspid regurgitation (1), degenerative mitral valve disease (1), post mitral valve replacement (1), post aortic valve replacement (1), valvular

disease (1), ventricular septal defect (1), post ductus arteriosus (1), superior mesenteric artery thrombosis (1), ventricular tachycardia (1), refractory ventricular tachycardia (1), pulmonary thromboembolism (1), thromboembolic disease-not specified (1), volume overload (1), hypotension (1), ischemic cardiomyopathy (1), cardiomyopathy-not specified (1), chronic venous insufficiency (1), vasculitis (1), pregnancy-induced hypertension (1), lower limb ischemia (1), Wolf Parkinson white syndrome (1), right ventricular dysfunction (1), multi infarct- not specified (1), hemorrhagic infarct- not specified (1), post-cardiac surgery-not specified (1), sick sinus syndrome (1), heart disease-not specified (1) and Other CVS disease-not specified (6)

<sup>9</sup>Other RS diseases: Active tuberculosis (124), old pulmonary tuberculosis (40), pulmonary edema (38), interstitial lung disease (29), obstructive sleep apnea (19), pulmonary hypertension (7), bronchiectasis (5) pneumonitis (4), allergic bronchitis (3), reactive airway disease (3), chronic pulmonary disease-not specified (3), emphysema (2), left diaphragmatic palsy (1), sinusitis (1), pleural effusion (1), pneumothorax (1), chronic restrictive lung disease (1), lung hypoplasia (1), destroyed lung (1), hemothorax (1), bronchitis (1), cor pulmonale (1), pulmonary embolism (1), pneumothorax (1), right pneumomediastinum (1), post pneumonectomy (1), and non-specified lung disease (1).

<sup>10</sup>Other genitourinary diseases: renal failure-not specified (46), renal transplant (31), benign prostatic hyperplasia (25), nephropathy (15), uremic encephalopathy (8), post nephrectomy (5), nephritis (5), urosepsis (4), autosomal dominant polycystic kidney disease (4), renal calculi (3), diabetic nephropathy (3), polycystic kidney disease(2), solitary kidney (2), prostatic hypertrophy (2), hydroureteronephrosis (2), left atrophic kidney (1), renal insufficiency (1), obstructive uropathy (1), anti-GBM disease (1), hydrocele (1), hyperoxaluria (1), pyocele surgery (1), and renal disease- not specified (5).

<sup>11</sup>Other CNS diseases: seizure disorder (92), Parkinson's disease (80), Myasthenia gravis (18), Alzheimer's disease (14), subdural hemorrhage (5), dementia (5), meningitis (4), Down syndrome (4), residual polio (3), intellectual disability (3), brainstem dysfunction (2), brain injury (2), cerebral palsy (2), acute encephalopathy (1), myelopathy (1), paraparesis (1), multiple sclerosis (1), peripheral neuropathy (1), trigeminal neuralgia (1), carotid cavernous fistula (1), cavernous sinus thrombosis (1), transverse myelitis (1), motor neuron disease (1), cavernous sinus syndrome (1), progressive supranuclear palsy (1), spinal cord injury (1), spinocerebellar ataxia (1), post craniectomy (1), syringomyelia (1), ocular myasthenia (1), traumatic paralysis (1), quadriplegia

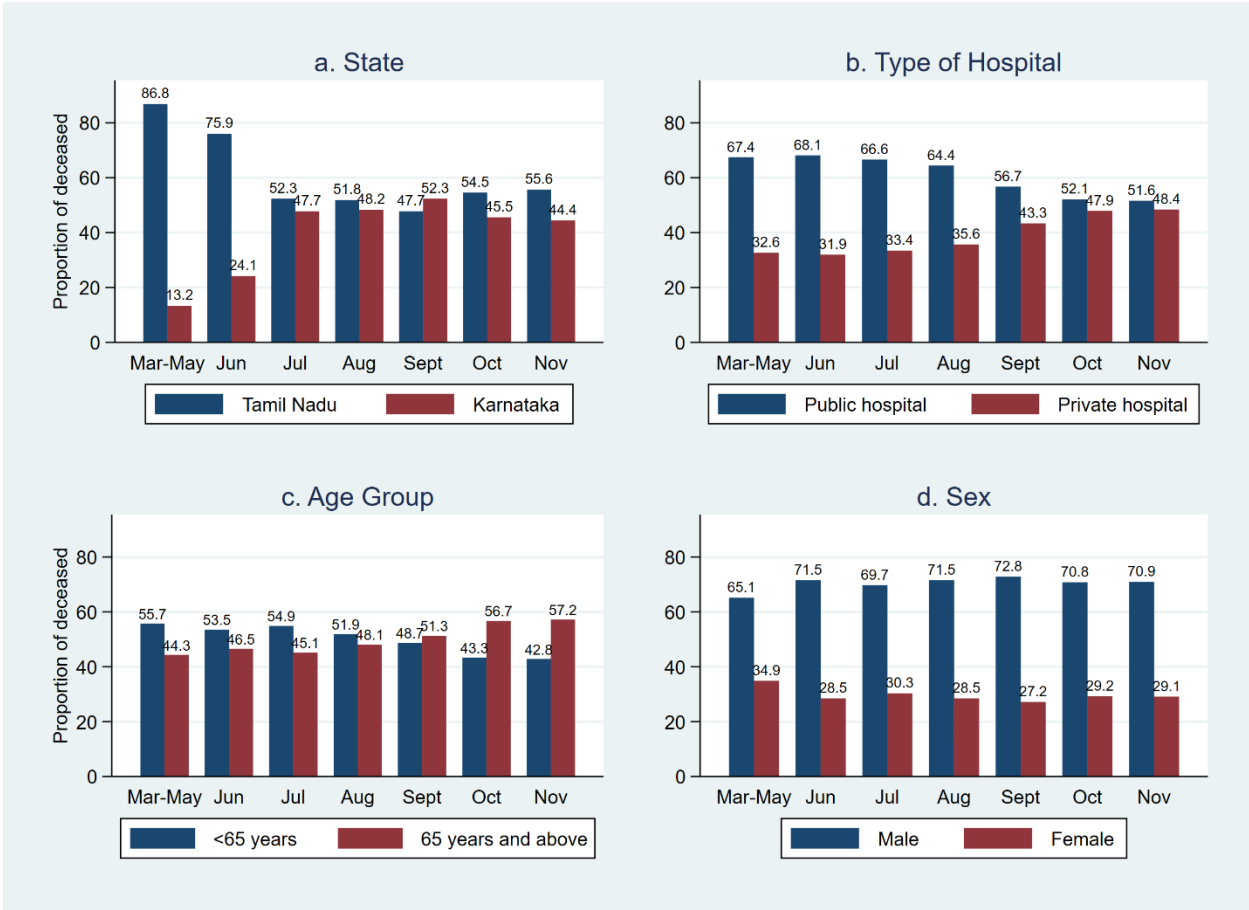
(1), basilar artery aneurysms (1), cauda equina syndrome (1), laminectomy (1), glioma (1), suprasellar tumor (1) and bilateral basal ganglia hyperdense lesion (1)

<sup>12</sup>Cancers: Lymphoma (33), Breast cancer (25), prostate cancer (13), lung cancer (10), laryngeal cancer (9), multiple myeloma (8), ovarian cancer (7), stomach cancer (7), leukemia-unspecified (6), cervix cancer (5), rectal cancer (5), tongue cancer (5), acute myeloid leukemia (4), meningioma (4), bladder cancer (4), colon cancer (4), intracranial tumors (4), squamous cell carcinoma (4), cholangiocarcinoma (4), pancreas cancer (4), oropharyngeal cancer (3), chronic myeloid leukemia (3), pituitary adenoma (3), chronic lymphocytic leukemia (3), esophagus cancer (2), endometrial cancer (2), myelodysplastic syndrome (2), acute lymphoid leukemia (2), intraabdominal malignancy (2), renal cancer (2), liposarcoma (1), liver cancer (1), anal cancer (1), appendicular cancer (1), intestinal malignancy-not specified (1), astrocytoma (1), thymoma (1), myosarcoma (1), neuroendocrine tumor (1), melanoma (1), anaplastic ependymoma (1), cancers-unspecified (27).

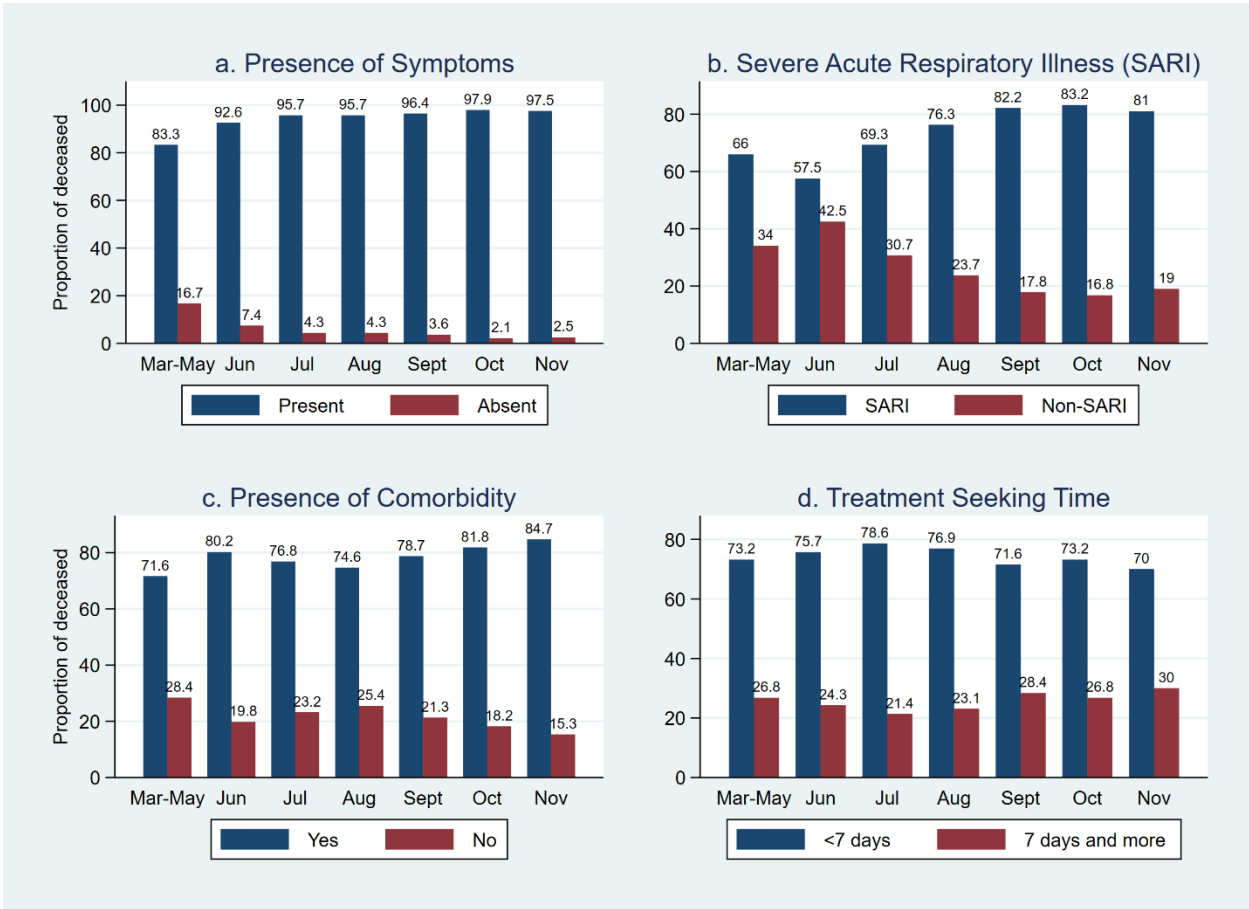
<sup>13</sup>Other diseases: Gastrointestinal-hepatitis B (20), metabolic encephalopathy (13), hepatic encephalopathy (8), decompensated liver disease (14), hepatitis C (9), obstructive jaundice (5), alcoholic liver disease (4), upper gastrointestinal bleed (3), chronic pancreatitis (3), perforation peritonitis (3), esophageal varices (3), end stage liver disease (3), portal hypertension (3), acute pancreatitis (2), ileal gangrene (2), necrotizing pancreatitis (2), drug induced hepatitis (2), post liver transplant (2), liver dysfunction (2), cirrhosis (2), peptic ulcer (2), bowel wall ischemia (2), acute liver failure (1), hepatitis-not specified (1), pancreatitis unspecified (1), splenomegaly (1), appendicular perforation (1), Wilson's disease (1), hepatomegaly (1), cholelithiasis (1), sub-acute intestinal obstruction (1), achalasia cardia (1), acute on chronic liver disease (1), gastroesophageal reflux disease (1) and unspecified liver disease (4). Others- anemia (53), rheumatoid arthritis (33), psychiatric disorders (41), bone fracture (19), cellulitis (14), HIV/AIDS (10), maternal death (9), systemic lupus erythematosus (9), musculoskeletal disorders (8), pancytopenia (8), extra pulmonary tuberculosis (6), tuberculosis site unspecified (6), necrotizing fasciitis (5), kyphoscoliosis (4), thrombocytopenia (4), filariasis (4), myotonic dystrophy (4), bedridden/chronic debilitating state (4), psoriasis (4), foot gangrene (4), organophosphorus poisoning (3), head injury (3), bedsore (3), arthritis (3), Paget's disease (3), dyselectrolytemia (3), Post lower segment Caesarian section (3), septicemia (2), hyponatremia (2), polytrauma (2), gout (2), aplastic anemia (2), amyloidosis (2), disseminated intravascular coagulopathy (2), febrile

neutropenia (1), failure to thrive (1), Potts' puffy tumor (1), hypokalemia (1), hyperkalemia (1), scoliosis (1), low birth weight (1), multiple surgeries (1), bullous pemphigoid (1), mixed connective disease disorder (1), Fournier gangrene (1), Plummer Vinson syndrome (1), cataract (1), granuloma (1), polycythemia (1), post-hernioplasty (1), umbilical hernia (1), coagulopathy (1), stem cell transplant (1), anterior mediastinal mass (1), chromosomal anomaly (1), blunt injury abdomen (1), hemophilia (1), perineal injury (1), antiphospholipid antibodies (1), oduvan leaf poisoning (1), common variable immunodeficiency (1), hemolytic anemia (1), cystic fibrosis (1), glaucoma (1), obstructed hernia (1), old tuberculoma (1), miliary tuberculosis (1), vestibulopathy (1), TB lymphadenitis (1), cachexia (1), C3-C4 subluxation (1), vitiligo (1), bicytopenia (1), systemic sclerosis (1), below knee amputation (1), fat embolism (1), Potts spine (1), osteoporosis (1), fibroid (1), maintenance hemodialysis (1), unspecified transplant (1), unspecified dermatological condition (2) and not clearly specified (6).

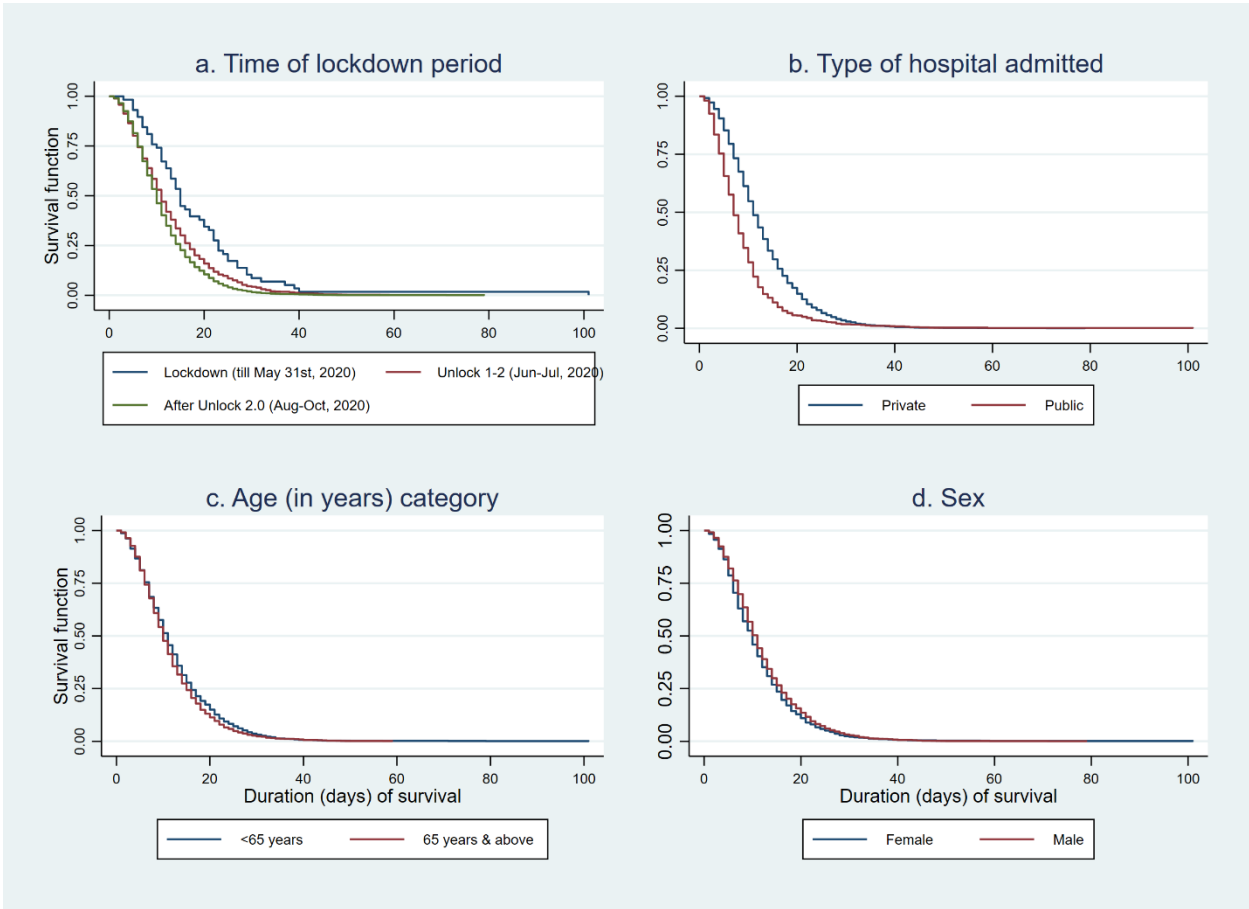
**Figure S1. Month-wise distribution of COVID-19 deaths across demographic and hospital characteristics in Tamil Nadu and Karnataka of India.**



**Figure S2. Month-wise distribution of COVID-19 deaths across clinical and time characteristics in Tamil Nadu and Karnataka of India.**

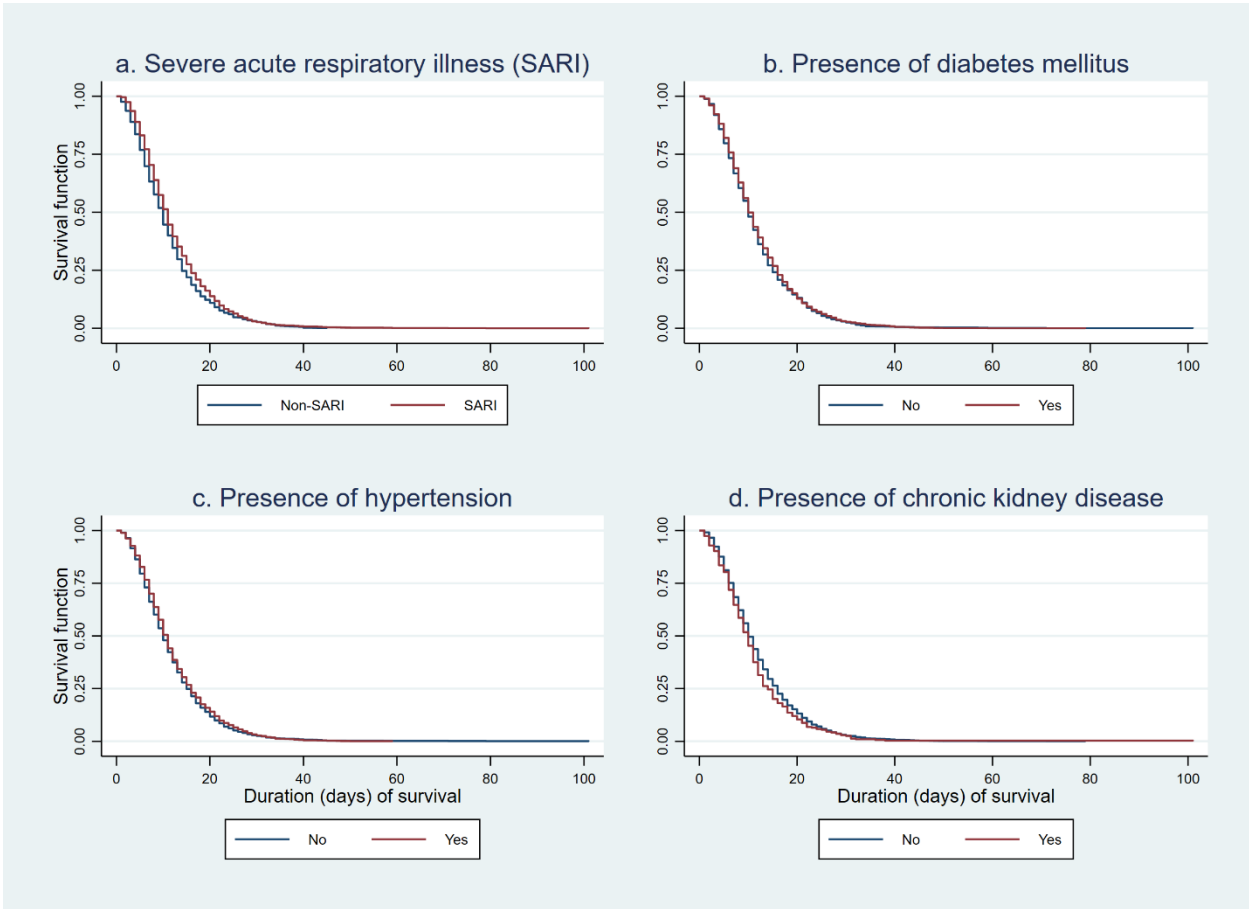


**Figure S3. Duration survival (in days) of patients deceased with COVID-19 across demographic and time characteristics in Tamil Nadu and Karnataka of India.**





**Figure S4. Duration survival (in days) of patients deceased with COVID-19 across clinical and comorbidity characteristics in Tamil Nadu and Karnataka of India.**



**Supplementary Table 1. Case Fatality Rate (CFR) of the states of India as of 30.11.2020**

<b>State</b>	<b>Total Cases</b>	<b>Total Deaths</b>	<b>CFR</b>
Tamil Nadu	781915	11712	1.5
Karnataka	884897	11778	1.3
Andaman and Nicobar Islands	4704	61	1.3
Andhra Pradesh	867683	6988	0.8
Arunachal Pradesh	16269	54	0.3
Assam	212617	981	0.5
Bihar	234119	1259	0.5
Chandigarh (UT)	17342	276	1.6
Chhattisgarh	235998	2840	1.2
Dadra and Nagar Haveli, Daman and Diu (UTs)	3332	2	0.1
Delhi	566648	9066	1.6
Goa	47804	687	1.4
Gujarat	208278	3969	1.9
Haryana	232522	2401	1.0
Himachal Pradesh	40003	635	1.6
Jammu and Kashmir (UT)	109854	1685	1.5
Jharkhand	108984	963	0.9
Kerala	599600	2223	0.4
Ladakh (UT)	8403	116	1.4
Madhya Pradesh	204745	3250	1.6
Maharashtra	1820059	47071	2.6
Manipur	24910	273	1.1
Meghalaya	11740	111	0.9
Mizoram	3826	5	0.1
Nagaland	11159	64	0.6
Odisha	318307	1734	0.5
Puducherry (UT)	36935	609	1.6
Punjab	151538	4780	3.2

Rajasthan	265386	2292	0.9
Sikkim	4985	108	2.2
Telangana	269816	1458	0.5
Tripura	32695	370	1.1
Uttar Pradesh	541873	7742	1.4
Uttarakhand	74340	1222	1.6
West Bengal	480813	8376	1.7
India (Overall)	9434099	137161	1.5

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UT-Union Territory

**Supplementary Table 2. Demographic and clinical characteristics associated with survival time among patients died with coronavirus disease-2019 (COVID-19) in India.**

<b>Characteristics</b>	<b>Survival time (n-4079) Median (IQR)<sup>1</sup></b>	<b>Unadjusted Regression Coefficient<sup>2</sup> (95% CI)</b>	<b>Adjusted Regression Coefficient<sup>2</sup> (95% CI)</b>
<b>Total</b>	<b>10 (7, 16)</b>		
Admission period			
Complete lockdown	15 (11, 22.8)	1.50 (0.61-2.38)	1.75 (0.90-2.60)
Up to Unlock 2.0	11 (6, 17)	1	1
After Unlock 2.0	10 (7,15)	-0.27 (-0.49-(-0.04))	0.22 (<-0.01-0.44)
State of residence			
Tamil Nadu	10 (7,16)	0.24 (0.01-0.46)	0.62 (0.39-0.84)
Karnataka	NA	1	1
Type of hospital			
Public	8 (5, 11)	1	1
Private	11 (7, 17)	3.79 (3.48-4.10)	3.94 (3.63-4.25)
Age group (in years)			
<45	10 (6, 15.8)	1	1
45-64	11 (7, 16)	0.21 (-0.20-0.62)	0.01 (-0.38-0.41)
≥65	10 (6, 15)	0.67 (0.27-1.08)	0.20 (-0.20-0.59)
Sex			
Male	11 (7, 16)	0.44 (0.21-0.68)	0.37 (0.14-0.59)
Female	10 (6, 15)	1	1
Symptom status			
Symptomatic	10 (7, 16)	0.90 (0.29-1.50)	-0.18 (-0.77-0.40)
Asymptomatic	NA	1	1
Presence of SARI <sup>3</sup>			
Yes	11 (7, 16)	1.78 (1.44-2.12)	2.00 (1.67-2.34)
No	10 (6, 14)	1	1
Diabetes mellitus			
Yes	11 (7, 16)	0.28 (-0.04-0.60)	-0.08 (-0.40-0.24)
No	10 (6, 16)	1	1

<b>Hypertension</b>				
	Yes	11 (7, 16)	0.59 (0.30-0.87)	0.48 (0.19-0.78)
	No	10 (6, 16)	1	1
<b>Coronary artery disease</b>				
	Yes	10 (6, 16)	-0.43 (-0.83-(-0.03))	-0.83 (-1.22-(-0.44))
	No	10 (7, 16)	1	1
<b>Asthma</b>				
	Yes	11 (7, 17)	0.57 (-0.48-1.62)	Not included
	No	10 (7, 16)	1	
<b>COPD<sup>4</sup></b>				
	Yes	9 (6, 13)	0.28 (-0.69-1.24)	Not included
	No	10.5 (7, 16)	1	
<b>Chronic Kidney Disease</b>				
	Yes	10 (6, 15)	-1.49 (-1.98-(-1.00))	-1.22 (-1.71-(-0.72))
	No	11 (7, 16)	1	1
<b>Chronic Liver Disease</b>				
	Yes	9.5 (6, 23.8)	1.83 (0.35-3.31)	1.47 (0.01-2.94)
	No	10 (7, 16)	1	1
<b>Cerebrovascular accident</b>				
	Yes	9 (6.8,14.3)	-0.63 (-1.62-0.35)	Not included
	No	10 (7, 16)	1	
<b>Cancer</b>				
	Yes	9 (5,15)	0.40 (-0.74-1.54)	Not included
	No	10 (6.3, 16)	1	

<sup>1</sup>All unadjusted and adjusted analysis was carried out after multiple imputation by chained equation using predictive mean matching nearest neighbors method; <sup>2</sup>IQR- Interquartile range; <sup>3</sup>SARI-Severe acute respiratory illness (fever with at least one respiratory symptom namely cough or breathlessness); <sup>4</sup>COPD-Chronic obstructive pulmonary disease

**Supplementary Table 3. Mean time (in days) taken for seeking treatment and duration of hospitalization across various socio-demographic and clinical profile of deceased due to COVID-19 in India.**

	Treatment seeking time (n-4085)	Duration of hospitalization (n-19933)	Survival time (n-4079)
Characteristics	Mean (SD) <sup>1</sup>	Mean (SD)	Mean (SD)
<b>Total</b>	<b>4.7 (3.7)</b>	<b>5.3 (5.7)</b>	<b>12.1 (7.8)</b>
Admission period			
Complete lockdown	5.0 (3.1)	7.3 (11.3)	18.1 (14.2)
Up to Unlock 2.0	4.4 (3.2)	5.4 (6.1)	12.7 (8.5)
After Unlock 2.0	4.9 (3.9)	5.2 (5.2)	11.6 (7.1)
State of residence			
Tamil Nadu	4.7 (3.7)	5.7 (5.8)	12.1 (7.8)
Karnataka	NA	4.8 (5.4)	NA
Type of hospital			
Public	3.9 (2.9)	4.5 (5.0)	9.0 (7.2)
Private	4.9 (3.8)	7.2 (6.5)	12.9 (7.7)
Age group (in years)			
<45	5.0 (4.0)	4.8 (5.5)	12.3 (9.0)
45-64	4.9 (3.8)	5.1 (5.8)	12.5 (8.1)
≥65	4.6 (3.6)	5.6 (5.6)	11.8 (7.5)
Sex			
Male	4.5 (3.2)	5.1 (5.8)	12.3 (7.8)
Female	4.8 (3.8)	5.4 (5.6)	11.4 (7.8)
Symptom status			
Symptomatic	4.7 (3.7)	5.7 (6.0)	12.1 (7.8)
Asymptomatic	NA	4.5 (6.4)	NA
Presence of any respiratory symptoms			
Yes	4.8 (3.7)	5.7 (6.0)	12.0 (7.8)
No	4.2 (3.5)	6.2 (6.4)	12.5 (7.7)
Presence of fever			
Yes	5.0 (3.7)	5.8 (6.1)	12.6 (7.9)
No	4.0 (3.6)	5.4 (5.8)	10.6 (7.2)
Presence of SARI <sup>2</sup>			
Yes	5.0 (3.7)	5.8 (6.0)	12.5 (7.9)
No	4.0 (3.5)	5.6 (6.0)	11.1 (7.4)
Comorbidity status			
Present	4.7 (3.7)	5.5 (5.8)	12.1 (7.8)
Absent	4.7 (3.3)	4.8 (5.2)	11.8 (7.6)
Diabetes mellitus			
Yes	4.7 (3.8)	5.6 (5.8)	12.1 (7.6)
No	4.7 (3.4)	5.0 (5.5)	12.0 (8.0)
Hypertension			

	Yes	4.7 (3.4)	5.6 (5.9)	12.3 (7.6)
	No	4.7 (3.9)	5.1 (5.5)	11.9 (8.0)
Coronary artery disease				
	Yes	4.6 (4.2)	5.4 (5.7)	11.8 (7.7)
	No	4.7 (3.5)	5.3 (5.7)	12.1 (7.8)
Asthma				
	Yes	4.8 (2.9)	5.8 (5.1)	12.2 (6.8)
	No	4.7 (3.7)	5.3 (5.7)	12.1 (7.8)
COPD <sup>3</sup>				
	Yes	4.5 (2.8)	5.3 (6.0)	10.8 (8.0)
	No	4.7 (3.7)	5.3 (5.7)	12.1 (7.8)
Chronic Kidney Disease				
	Yes	4.5 (3.8)	4.9 (5.4)	11.5 (8.3)
	No	4.7 (3.7)	5.4 (5.7)	12.1 (7.7)
Chronic Liver Disease				
	Yes	6.2 (7.4)	5.5 (6.2)	14.7 (13.0)
	No	4.7 (3.6)	5.3 (5.7)	12.0 (7.7)
Cerebrovascular accident				
	Yes	4.7 (3.9)	5.4 (5.4)	11.3 (7.3)
	No	4.7 (3.7)	5.3 (5.7)	12.1 (7.8)
Cancer				
	Yes	4.0 (2.6)	5.9 (6.1)	11.0 (7.0)
	No	4.7 (3.7)	5.3 (5.7)	12.1 (7.8)

<sup>1</sup>SD-Standard deviation; <sup>2</sup>SARI-Severe acute respiratory illness (fever with at least one respiratory symptom namely cough or breathlessness); <sup>3</sup>COPD-Chronic obstructive pulmonary disease.