

Supplemental Table 1. Missing Lab Data Profile.

Normonatremia: [Na]: 135-145 mEq/L; Hypernatremia: [Na]: >145 mEq/L, [Na] levels corrected by adding 1.6 mEq/L for each 100 mg/dL above 100 mg/dL of the concomitantly measured serum glucose levels.

Laboratory tests n(%)	All Cohort	Normonatremia	Hypernatremia
	n= 1,963,020 (100%)	n = 1,902,406 (96.8%)	n = 60,614 (3.2%)
Serum albumin (g/dL)	675727 (34.42)	656081 (34.49)	19646 (32.41)
Serum creatinine (mg/dL)	165083 (8.41)	163175 (8.58)	1908 (3.15)
Serum potassium (mEq/L)	19024 (0.97)	18209 (0.96)	815 (1.34)
Glucose (mg/dL)	257776 (13.13)	255010 (13.4)	2766 (4.56)
Hemoglobin A1C	1770678 (90.2)	1717505 (90.28)	53173 (87.72)
CO2 (meq/L)	484479 (24.68)	472690 (24.85)	11789 (19.45)
O2 Saturation (%)	1477970 (75.29)	1437076 (75.54)	40894 (67.47)
Calcium (mg/dL)	281253 (14.33)	270656 (14.23)	10597 (17.48)
Phosphorus (mg/dL)	1565468 (79.75)	1526077 (80.22)	39391 (64.99)
Magnesium, mmol/L	1493027 (76.06)	1452568 (76.35)	40459 (66.75)
Chloride, mmol/L	45241 (2.3)	43732 (2.3)	1509 (2.49)
Serum Osmolality, mOsm/L	1943597 (99.1)	1885015 (99.09)	58582 (96.65)
Anion Gap mmol/L	564377 (28.75)	545267 (28.66)	19110 (31.53)
Intact PTH (pg/mL)	1955186 (99.6)	1894979 (99.61)	60207 (99.33)
Ferritin (ng/mL)	1907588 (97.18)	1848979 (97.19)	58609 (96.69)
Iron saturation (%)	1960787 (99.89)	1900277 (99.89)	60510 (99.83)
Hemoglobin (g/dL)	86589 (4.41)	83922 (4.41)	2667 (4.4)
WBC (>10 ³ /mL)	574255 (29.25)	556806 (29.27)	17449 (28.79)
Platelet Count	1751631 (89.23)	1698771 (89.3)	52860 (87.21)
Serum Uric Acid (mmol/L)	1870217 (95.27)	1812960 (95.3)	57257 (94.46)
Blood Urea Nitrogen, mmol/L	63786 (3.25)	61724 (3.24)	2062 (3.4)
AST, U/L	761600 (38.8)	739835 (38.89)	21765 (35.91)
ALT, U/L	648617 (33.04)	630125 (33.12)	18492 (30.51)
Total Bilirubin, μmol/L	666907 (33.97)	648204 (34.07)	18703 (30.86)
Serum Total Protein, mg/dL	629715 (32.08)	613289 (32.24)	16426 (27.1)

Supplemental Table 2. Profile of Hospitalized Patients with and Without Hyponatremia

Normonatremia: [Na]: >135-145 mEq/L; Hyponatremia: [Na]: >145 mEq/L (Mild Hyponatremia: [Na] >145-150 mEq/L, Moderate Hyponatremia: [Na] >150-155 mEq/L, Severe Hyponatremia: [Na] >155 mEq/L). The percentages represent the percentage of each outcome within each [Na] category.

Natremia Status at Hospital Admission		In-Hospital Mortality, n (%)	Discharge to Hospice, n (%)	Discharge to Nursing Facility, n (%)	Discharge to Home, n (%)
Normonatremia		41,352 (85.3)	13,930 (92.4)	219,415 (93.4)	1,627,709 (97.79)
Hyponatremia	Mild	5,097 (10.5)	793 (5.3)	11,918 (5.1)	34,133 (2.1)
	Moderate	1,325 (2.7)	210 (1.4)	2,200 (0.9)	2,054 (0.1)
	Severe	695 (1.4)	150 (1.0)	1,435(0.6)	604 (0.0)
eGFR Groups					
Normonatremia	<15	3,116 (7.5)	580 (4.2)	7,294 (3.3)	26,967 (1.7)
	15-29	6,109 (14.8)	1,329 (9.5)	19,214 (8.8)	43,955 (2.7)
	30-59	13,945 (33.7)	4,074 (29.2)	75,253 (34.3)	248,454 (15.3)
	60-89	12,214 (29.5)	4,828 (34.7)	85,920 (39.2)	546,724 (33.6)
	≥ 90	5,968 (14.4)	3,119 (22.4)	31,734 (14.5)	761,609 (46.8)
Mild Hyponatremia	<15	384 (5.4)	58 (5.0)	569 (3.7)	997 (2.7)
	15-29	946 (13.3)	116 (10.1)	1,719 (11.1)	1,864 (5.1)
	30-59	2,002 (28.1)	261 (22.6)	4,660 (30.0)	8,051 (21.9)
	60-89	1,215 (17.1)	244 (21.2)	3,594 (23.1)	11,438 (31.1)
	≥ 90	550 (7.7)	114 (9.9)	1,376 (8.8)	11,783 (32.0)
Moderate Hyponatremia	<15	159 (2.2)	31 (2.7)	196 (1.3)	119 (0.3)
	15-29	276 (3.9)	42 (3.6)	463 (3.0)	215 (0.6)
	30-59	477 (6.7)	71 (6.2)	817 (5.3)	561 (1.5)
	60-89	274 (3.8)	51 (4.4)	514 (3.3)	536 (1.5)
	≥ 90	139 (2.0)	15 (1.3)	210 (1.4)	623 (1.7)
Severe Hyponatremia	<15	131 (1.8)	29 (2.5)	192 (1.2)	43 (0.1)
	15-29	218 (3.1)	29 (2.5)	383 (2.5)	115 (0.3)
	30-59	224 (3.1)	58 (5.0)	538 (3.5)	219 (0.6)
	60-89	86 (1.2)	28 (2.4)	239 (1.5)	124 (0.3)
	≥ 90	36(0.5)	6(0.5)	83(0.5)	103(0.3)
Age groups					
Normonatremia	18-45	2,778 (6.7)	587 (4.2)	5,076 (2.3)	504,021 (30.9)
	46-65	9,950 (24.1)	2,764 (19.8)	33,733 (15.4)	615,512 (37.8)
	66-75	8,865 (20.7)	2,866 (20.6)	44,573 (20.3)	266,816 (16.3)
	76-89	15,583 (37.7)	5,505 (39.5)	103,799 (47.3)	216,852 (13.2)
	≥ 90	4,476 (10.8)	2,208 (15.8)	32,234 (14.7)	24,508 (1.5)
Mild Hyponatremia	18-45	531 (7.5)	15 (1.3)	251 (1.6)	7,645 (20.8)
	46-65	1,213 (17.0)	92 (7.8)	1,652 (10.4)	13,123 (35.7)
	66-75	873 (12.3)	176 (14.8)	2,319 (14.6)	6,491 (17.6)
	76-89	1,821 (25.6)	364 (30.7)	5,949 (37.4)	6,009 (16.3)

	≥ 90	659 (9.3)	168 (14.2)	2,014 (12.7)	865 (2.3)
Moderate Hypernatremia	18-45	152 (2.1)	1 (0.1)	40 (0.3)	758 (1.2)
	46-65	287 (4.0)	17 (1.4)	353 (2.2)	1,364 (2.2)
	66-75	216 (3.0)	23 (1.9)	402 (2.5)	917 (1.5)
	76-89	489 (6.8)	114 (9.6)	1,071 (6.7)	2,025 (3.3)
	≥ 90	181 (2.5)	59 (5.0)	393 (2.5)	725 (1.2)
Severe Hypernatremia	18-45	51 (0.7)	3 (0.3)	24 (0.2)	195 (0.3)
	46-65	96 (1.4)	9 (0.8)	181 (1.1)	475 (0.8)
	66-75	117 (1.6)	26 (2.2)	250 (1.6)	469 (0.7)
	76-89	301 (4.2)	77 (6.5)	766 (4.8)	1,272 (2.0)
	≥ 90	130 (1.8)	43 (3.6)	254 (1.6)	473 (7.6)