

Supplementary Methods

Variables of Interest

Race/ethnicity was categorized as Asian, Black, White, Hispanic (any race), or Other. Insurance status was categorized as self-pay/no insurance, Medicare, Medicaid, or the composite private/Veterans affairs/Champus/Other. Past medical history was obtained from electronic records including depression status and the presence of the following stroke risk factors: atrial fibrillation/flutter, previous IS, TIA, coronary artery disease, carotid stenosis, diabetes mellitus, peripheral vascular disease, smoking, dyslipidemia, peripheral vascular disease, hypertension, heart failure, or renal insufficiency.

Medications prior to admission and at discharge were recorded including use of the following agents: antiplatelet, anticoagulants, antihypertensives, antithrombotics, cholesterol-reducing medications, and diabetes medications. Ambulatory status at admission or discharge was defined using a three-level categorization of able to ambulate independently, ambulate with assistance, or unable to ambulate.

Outcomes/Endpoints

All-cause mortality was ascertained on the basis of the death rate recorded in the vital status file. Readmission data was ascertained from the inpatient institutional file. Readmission diagnosis was determined using the International Classification of Diseases, Ninth or Tenth Revision, Clinical Modification (ICD-9/10-CM) discharge codes. IS/TIA readmission was determined by ICD-9/10-CM principal diagnoses codes of I63, G45, 362, 433-436, 346620-34663, G43601, G43609, G43611, G43619 on the inpatient claim. Cardiovascular readmission was determined by the Diagnosis Related Groups: 4011, 4019, 40200, 40201, 40210, 40211, 40290, 40291, 4030, 40300, 40301, 4031, 40310, 40311, 4039, 40390, 40391, 4040, 4044, 40401-40403, 4041, 40410, 40411-40413, 4049, 4049-40493, 4010, 40501, 40509, 40511, 40519, 40591, 40599, 4372, 3940, 3941, 3942, 3949-3952, 3959-3963, 3968-3971, 3979, 4240-4243, 42490, 42491, 42499, 7852, 7853, V422, V433, 4250, 4251, 42511, 42518, 4252-4254, 4257-4259, 3282, 3640, 3641-3643, 7420-7423, 11281, 11503, 11504, 11513, 11514, 11593, 11594, 1303, 3910-3912, 3918-3920, 393, 3980, 39890, 39899, 4200, 42090, 42091, 42099, 4210, 4211, 4219, 4220, 42290, 42291-42293, 42299, 4230-4233, 4238-4290, 4100, 41000-41002, 4101, 41010, 41011, 41012, 4102, 41020-41022, 4102, 41020-41032, 4104, 41040, 41041, 41042, 4105, 41050, 41051, 41052, 4106, 41060, 41061, 41062, 4107, 41070, 41071, 41072, 4108, 41080, 41081, 41082, 4109, 41090-41092, 41406, 4130, 4131, 4139, 4111, 4110, 4118, 41181, 41189, 4140, 41400, 41401, 4142, 4143, 4144, V4582, 412, 4148, 4149, V4581, 78650, 78651, 78659, 4150, 4151, 4152, 41513, 41519, 4160, 4161, 4162, 4168-4171, 4178, 4179, 41410, 41411, 41412, 41419, 4291-4293, 4295, 4296, 42971, 42979, 42981-42983, 42989, 4299, 4260, 42610, 42611, 42612, 42613, 4262-4264, 42650-42654, 4266, 4267, 42681, 42682, 42689, 4269, V450, V4500-V4502, V4509, V533, V5331, V5332, V5339, 4270, 4271, 42731, 42732, 42760, 42761, 42769, 42781, 4272, 42789, 4279, 7850, 7851, 42741, 42742, 4275, 42820-42823, 42830-42833, 42840-42843, 4280, 39891, 4281, 4289, 420, 431, 4320, 4321, 4329, 43301, 43311, 43321, 43331, 43381, 43391, 4340, 43400, 43401, 4341, 43410, 43411, 4349, 43490, 43491, 34660, 34661-34663, 436, 4330, 4330, 43300, 4331, 43310, 4332, 43320, 4333, 43330, 4338, 43380, 4339,

43390, 4370, 4371, 4373-4379, 4350-4353, 4358, 4359, 438, 4380, 43810-43814, 43819-43822, 43830-43832, 43840-43842, 43850-43853, 4386, 4387, 43881043885, 43889, 4389, 4402, 44020, 44021, 44022, 44023, 44029, 4404, 4439, 4400, 4401, 4408, 4409, 5570, 5571, 5579, 44321-44324, 44329, 4414, 44772, 4410, 44100, 44101-44103, 4411-4417, 4419-4423, 44281-44284, 44289, 4429, 44770, 44771, 44773, 44501, 44502, 44581, 44589, 44422, 4440, 44401, 44409, 4441, 44421, 44481, 44489, 4449, 4580, 4581, 4588, 4589, 4430, 4431, 44381, 44382, 44389, 4460, 4461, 4462, 44620, 44621, 44629, 4463-4467, 4470-4476, 4478-4481, 4489, 4590, 45989, 4599, 7859, 79430, 79431, 79439, 7962, V125, V1250, V1253, V1254, V1259, V151, V421, V432, V4321, V4322, V434, V717, 4510, 45111, 45119, 4512, 45181-45184, 45189, 4519, V1252, 452, 4530-4533, 45340-45342, 45350-45352, 4536, 45371-45377, 45379, 4538, 45381, 45382-45387, 45389, 4539, V1251, V1255, I312, I6000-I6002, I6010-I6012, I6020-I6022, I6030-I6032, 'I604', 'I6050', 'I6051', 'I6052', I606-I616, I618, I619, I6200-I6203, I621, I629, R58, I6300, I63011, I63012, I63019, I6302, I63031, I63032, I63039, I6309, I6310, I63111, I63112, I63119, I6312, I63131, I63132, I63139, I6319, I6320, I63211, I63212, I63219, I6322, I63231, I63232, I63239, I6329, I6330, I63311, I63312, I63319, I63321, I63322, I63329, I63331, I63332, I63339, I63341, I63342, I63349, I6339, I6340, I63411, I63412, I63419, I63421, I63422, I63429, I63431, I63432, I63439, I63441, I63442, I63449, I6349, I6350, I63511, I63512, I63519, I63521, I63522, I63529, I63531, I63532, I63539, I63541, I63542, I63549, I6359, I636, I638, I639, G43601, G43609, G43611, G43619, I7401, I7409-I7411, I7419, I742-I745, I748, I749, I75011-I75013, I75019, I75021-I75023, I75029, I7581, I7589, I2601, I2602, I2609, I2690, I2692, I2699, I81, I820, I821, I82210, I82211, I82220, I82221, I82290, I82291, I823, I82401-I82403, I82409, I82411-I82413, I82419, I82421-I82423, I82429, I82431-I82433, I82439, I82441-I82443, I82449, I82491-I82493, I82499, I824Y1-I824Y3, I824Y9, I824Z1-I824Z3, I824Z9, I82501-I82503, I82509, I82511-I82513, I82519, I82521-I82523, I82529, I82531-I82533, I82539, I82541-I82543, I82549, I82591-I82593, I82599, I825Y1-I825Y3, I825Y9, I825Z1, I825Z2, I825Z3, I825Z9, I82601-I82603, I82609, I82611-I82613, I82619, I82621-I82623, I82629, I82701-I82703, I82709, I82711-I82713, I82719, I82721-I82723, I82729, I82811-I82813, I82819, I82890, I82891, I8290, I8291, I82A11-I82A13, I82A19, I82A21, I82A22, I82A23, I82A29, I82B11-I82B13, I82B19, I82B21-I82B23, I82B29, I82C11-I82C13, I82C19, I82C21-I82C23, I82C29, A1884, B376, B394, B395, B399, B5881, E0851, E0852, E0951, E0952, E1051, E1052, E1151, E1152, E1351, E1352, G450, G451, G452, G454, G458-G468, H209, I010-I012, I018-I020, I050-I052, I058-I062, I068-I072, I078-I083, I088-I092, I0981, I0989, I099, I10, I110, I119, I120, I129, I130, I1310, I1311, I132, I150-I152, I158, I159, I200, I201, I208, I209, I2101, I2102, I2109, I2111, I2119, I2121, I2129, I213, I214, I220-I222, I228-I238, I240, I241, I248, I249, I2510, I25110, I25111, I25118, I25119, I252, I253, I2541, I2542, I255, I256, I25700, I25701, I25708-I25711, I25718-I25721, I25728-I25731, I25738, I25739, I25750, I25751, I25758-I25761, I25768, I25769, I25790, I25791, I25798, I25799, I25811, I2582-I2584, I2589, I259, I270-I272, I2781, I2782, I2789, I279, I280, I281, I288, I289, I300, I301, I308-I311, I313, I314, I318-I32, I330, I339-I342, I348-I352, I358-I362, I368-I372, I378, I379, I38, I39, I400, I401, I408, I409, I41, I420-I425, I427-I429, I43, I440-I442, I4430, I4439, I444, I445, I4460, I4469, I447, I450, I4510, I4519, I452-I456, I4581, I4589, I459, I462, I468-I472, I479-I484, I4891, I4892, I4901, I4902, I491-I493, I4940, I4949, I495, I498, I499, I501, I5020-I5023, I5030-I5033, I5040-I5043, I509-I515, I517, I5181, I5189, I519, I52, I6501-I6503, I6509, I651, I6521-I6523, I6529, I658, I659, I6601-I6603, I6609, I6611-I6613, I6619, I6621-I6623, I6629, I663, I668-I672, I674-I677, I6781, I6782, I67841, I67848, I6789, I679, I680, I682, I688, I6900, I6901, I69020-I69023, I69028, I69031-I69034, I69039, I69041-I69044,

I69049, I69051-I69054, I69059, I69061-I69065, I69069, I69090-I69093, I69098, I6910, I6911, I69120-I69123, I69128, I69131-I69134, I69139, I69141-I69144, I69149, I69151-I69154, I69159, I69161-I69165, I69169, I69190-I69193, I69198, I6920, I6921, I69220-I69223, I69228, I69231-I69234, I69239, I69241-I69244, I69249, I69251-I69254, I69259, I69261-I69265, I69269, I69290-I69293, I69298, I6930, I6931, I69320-I69323, I6932, I69331-I69334, I69339, I69341-I69344, I69349, I69351-I69354, I69359, I69361-I69365, I69369, I69390-I69393, I69398, I6980, I6981, I69820-I69823, I69828, I69831-I69834, I69839, I69841-I69844, I69849, I69851-I69854, I69859, I69861-I69865, I69869, I69890-I69893, I69898, I6990, I6991, I69920-I69923, I69928, I69931-I69934, I69939, I69941-I69944, I69949, I69951-I69954, I69959, I69961-I69965, I69969, I69990-I69993, I69998, I700, I701, I70201-I70203, I70208, I70209, I70211-I70213, I70218, I70219, I70221-I70223, I70228, I70229, I70231-I70235, I70238, I70239, I70241-I70245, I70248, I70249, I7025, I70291-I70293, I70298, I70299, I708, I7090-I7092, I7100-I7103, I711-I716, I718-I724, I728, I729, I7300, I7301, I731, I7381, I7389, I739, I770-I776, I7771-I7774, I7779, I77810-I77812, I77819, I7789, I779-I781, I788-I791, I798, I8000-I8003, I8010-I8013, I80201-I80203, I80209, I80211-I80213, I80219, I80221-I80223, I80229, I80231-I80233, I80239, I80291-I80293, I80299, I803, I808, I809, I878, I879, I950, I951, I9589, I959, I998, I999, K550, K551, K558, K559, M300-M303, M308, M310-M312, M3130, M3131, M314-M318, M319, M3211, M3212, N262, Q010-Q012, Q018-Q02, Q030, Q031, Q038-Q043, R000-R002, R008, R009, R010-R012, R030, R072, R0782, R0789, R079, R0989, R9430, R9431, R9439, Z0389, Z45010, Z45018, Z4502, Z4509, Z4821, Z48280, Z86711, Z86718, Z8672-Z8674, Z8679, Z941, Z943, Z950-Z955, Z95810-Z95812, Z95818, Z95820, Z95828, Z959, Z9861, Z9889. Non-cardiovascular readmission was defined as all readmissions not meeting cardiovascular readmission criteria. Depression related readmission was defined as completed suicide, suicide attempt or major depressive episode (major depressive disorder [ICD-9-CM 296.2, 296.3, 296.5, 298.0, or 311], completed suicide/suicide attempt [ICD-9-CM E950-E959*], suicide ideation [ICD-9-CM V62.84], or suicide tendencies [ICD-9-CM 300.9]). Sepsis related readmission was defined as ICD-9/10-CM principal diagnoses codes of 0202, 0223, 0362, 0380, 0381, 03810-03812, 03819, 0382, 0383, 03840-03844, 03849, 0388, 0389, 0545, 449, 77181, 7907, 99591, 99592, A021, A207, A227, A267, A327, A392-A394, A400, A401, A403 A408, A409, A4101, A4102, A411-A414, Z4150-Z4153, A4159, A4181, A4189, A419, A427, A5486, B007, B377, I76, P360, P3610, P3619, P362, P3630, P3639, P364, P365, P368, P369, R6520.

Statistical Analysis

IQVIA serves as the data collection (through their Patient Management Tool™ – PMT™) and coordination center for GWTG. The Duke Clinical Research Institute serves as the data analysis center and has an agreement to analyze the aggregate de-identified data for research purposes.

Supplementary Table S1: Variable missing rates and imputation methods in the study

population.

Variable	Overall N=28,401	AD Yes N=7,565	AD No N=20,836	Naïve N=21,805	AD Yes N=1,835	AD No N=19,970	Imputation Methods
Demographics							
Age	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Female	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Race/Ethnicity	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Insurance Status	2.7	3.2	2.6	2.6	3.5	2.5	Set missing to No, as we assume medical history was missing when none applied.
Medical History	0.0	0.0	0.0	0.0	0.0	0.0	N/A
Prior Medications							
Antidepressants	1.1	1.1	1.1	1.1	1.1	1.1	
Antiplatelets	8.1	8.0	8.1	8.0	7.8	8.0	
Anticoagulants	47.2	51.2	45.8	45.7	47.5	45.6	
Antihypertensives	0.3	0.4	0.2	0.1	0.0	0.1	
Cholesterol-Reducers	0.0	0.0	0.0	0.0	0.0	0.0	
Diabetic Medications	0.5	0.9	0.4	0.1	0.1	0.1	
Presentation							
EMS Arrival	2.3	2.5	2.2	2.2	3.2	2.1	Set missing to No, as we assume EMS status was routinely recorded by ambulance personnel.
On time arrival	0.5	0.5	0.5	0.5	0.4	0.5	Set missing to No, which is the more prevalent level.
Onset to arrival times (min)	40.3	41.3	39.9	39.9	39.4	39.9	
Initial NIHSS	14.8	15.4	14.6	14.4	12.9	14.5	Will not impute, complete case analysis only.
Ambulatory Status at Admission	25.5	25.5	25.5	25.6	27.6	25.4	Set missing as a category.
Stroke Symptoms resolved	2.3	3.1	2.0	2.0	3.2	1.9	
Lab and Vitals							
Heart Rate (30-200), bpm	6.6	7.9	6.1	6.1	7.9	5.9	
SBP (50-250), mm Hg	6.6	7.8	6.2	6.1	7.8	6.0	
DBP (20-200), mm Hg	6.5	7.6	6.0	5.9	7.4	5.8	
BMI (10-100), kg/m ²	11.0	12.6	10.4	10.6	14.7	10.2	
HDL (0-120), mg/dL	13.8	15.1	13.3	13.1	14.4	13.0	
LDL (30-500), mg/dL	9.8	10.9	9.5	9.5	10.7	9.4	Impute to cohort median.
HgbA1c (0-20), %	41.2	41.8	41.0	40.5	38.0	40.7	
Discharge							
Ambulatory status at discharge	3.4	3.3	3.4	3.4	3.3	3.4	
Antihypertensives	1.2	1.6	1.0	1.0	1.1	1.0	
Antithrombotics	0.0	0.0	0.0	0.0	0.0	0.0	
Antiplatelets	3.8	3.6	3.9	3.8	3.7	3.8	
Aspirin	3.8	3.6	3.9	3.8	3.7	3.8	
Anticoagulants	3.8	3.6	3.9	3.8	3.7	3.8	

Supplementary Table S2: Baseline characteristics by discharge SSRI in AD naïve stroke

patients (N=377).

Variable	Overall N=377	SSRI AD Yes N=263	SSRI AD No N=114	P Value
Demographics				
Age*	79 (71 - 85)	78 (71 - 85)	80 (75 - 87)	0.027
Gender				0.704
Female	59.95	59.32	61.40	
Male	40.05	40.68	38.60	
Race/Ethnicity				0.501
White	85.15	85.17	85.09	
Black	8.75	9.51	7.02	
Hispanic (any race)	2.92	3.04	2.63	
Asian	0.80	0.38	1.75	
Other (includes UTD)	2.39	1.90	3.51	
Insurance Status				0.237
Self Pay/No Insurance	0.28	0.40	0.00	
Medicare	52.49	52.38	52.73	
Medicaid	6.35	4.76	10.00	
Private/VA/Champus/Other	40.88	42.46	37.27	
Medical History				
Depression	20.16	20.91	18.42	0.58
Atrial Fibrillation/Flutter	22.28	20.91	25.44	0.333
Stroke	25.46	25.48	25.44	0.994
TIA	10.08	9.13	12.28	0.351
CAD/Prior MI	25.73	27.38	21.93	0.267
Carotid Stenosis	4.51	5.32	2.63	0.248
Diabetes Mellitus	33.42	33.08	34.21	0.831
PVD	6.90	7.60	5.26	0.411
Hypertension	83.02	81.37	86.84	0.194
Smoker	12.73	12.55	13.16	0.871
Dyslipidemia	56.76	55.89	58.77	0.605
Heart Failure	9.02	8.37	10.53	0.502
Renal Insufficiency	5.84	6.84	3.51	0.205
Medications Prior to Admission				
Antiplatelets	58.50	57.32	61.39	0.485
Anticoagulants	21.83	18.84	28.81	0.1217
Antihypertensives	74.80	73.76	77.19	0.4819
Cholesterol-Reducers	51.72	52.09	50.88	0.8288
Diabetic Medications	25.27	24.81	26.32	0.7577
Presentation				
EMS Arrival	50.82	46.12	61.82	0.006
On time arrival (non-holiday, M-F 7a-6p)	49.47	48.66	51.33	0.636
Onset to arrival times (min)*	228.5 (93 - 646)	226 (110 - 637)	233 (86 - 707)	0.815
Onset to arrival times (min)				0.465
>=241	47.39	46.67	49.23	
>=120 and <241	22.17	24.24	16.92	
<120	30.43	29.09	33.85	
initial NIHSS*	5 (2 - 10)	4 (2 - 10)	5 (2 - 10)	0.557
initial NIHSS				0.335
>=15	12.84	11.16	17.02	
>=6 and <15	30.89	30.90	30.85	
<6	56.27	57.94	52.13	
Recorded Initial NIHSS Score	86.74	88.59	82.46	0.107
Ambulatory Status at Admission				0.828

Variable	Overall N=377	SSRI AD Yes N=263	SSRI AD No N=114	P Value
Able to ambulate independently	27.80	28.64	25.64	
With assistance from person	37.18	36.18	39.74	
Unable to ambulate	35.02	35.18	34.62	
Stroke Symptoms resolved at time of presentation	9.59	10.32	7.96	0.716
Discharge				
Ambulatory status at discharge				0.041
Able to ambulate independently	34.88	38.37	26.61	
With assistance from person	47.96	43.80	57.80	
Unable to ambulate	17.17	17.83	15.60	
Discharge Destination				0.033
Home	33.16	31.94	35.96	
Inpatient Rehabilitation Facility (IRF)	33.69	38.02	23.68	
Skilled Nursing Facility (SNF)	30.77	27.38	38.60	
Other Health Care Facility	2.39	2.66	1.75	
Antihypertensives	91.96	92.28	91.23	0.732
Antithrombotics	97.08	97.72	95.61	0.532
Antiplatelets	85.79	87.16	82.57	0.251
Aspirin	69.67	72.37	63.30	0.085
Anticoagulants	33.61	33.85	33.03	0.879

* P-values from chi-squared tests for independence for categorical variables and Wilcoxon rank sum tests for continuous variables.

Supplementary Table S3: SSRI AD vs. non-SSRI AD and clinical outcomes at one year post ischemic stroke discharge.

Outcomes at 1 Year	Cumulative Incidence	Unadjusted		Weight Adjusted		NIHSS Weight Adjusted	
		HR (95% CI)	P Value	HR (95% CI)	P Value	HR (95% CI)	P Value
All-cause mortality							
SSRI AD	53 (20.15)	0.65 (0.43, 0.99)	0.046	0.73 (0.47, 1.12)	0.148	0.83 (0.51, 1.35)	0.449
Non-SSRI AD	33 (28.95)	Reference		Reference		Reference	
All-cause readmission							
SSRI AD	108 (42.80)	0.76 (0.56, 1.02)	0.07	0.81 (0.59, 1.12)	0.205	0.82 (0.58, 1.18)	0.291
Non-SSRI AD	55 (49.10)	Reference		Reference		Reference	
Composite of mortality and all-cause readmission							
SSRI AD	129 (51.10)	0.75 (0.57, 0.99)	0.042	0.82 (0.61, 1.09)	0.169	0.83 (0.60, 1.16)	0.283
Non-SSRI AD	66 (58.92)	Reference		Reference		Reference	
CV readmission							
SSRI AD	54 (21.36)	0.79 (0.51, 1.23)	0.30	0.83 (0.53, 1.31)	0.422	0.80 (0.49, 1.30)	0.361
Non-SSRI AD	27 (24.11)	Reference		Reference		Reference	
MACE (Composite of mortality and CV readmission)							
SSRI AD	90 (35.64)	0.68 (0.49, 0.95)	0.024	0.74 (0.53, 1.04)	0.085	0.79 (0.54, 1.17)	0.24
Non-SSRI AD	52 (46.46)	Reference		Reference		Reference	
IS/TIA readmission							
SSRI AD	18 (7.10)	0.51 (0.25, 1.05)	0.069	0.49 (0.23, 1.03)	0.06	0.40 (0.17, 0.93)	0.033
Non-SSRI AD	14 (12.47)	Reference		Reference		Reference	
ICH readmission							
SSRI AD	4 (1.58)	1.72 (0.20, 14.91)	0.62	1.49 (0.17, 13.00)	0.719	0.95 (0.09, 10.46)	0.97
Non-SSRI AD	1 (0.89)	Reference		Reference		Reference	
Non-CV readmission							
SSRI AD	73 (29.04)	0.72 (0.50, 1.04)	0.08	0.79 (0.54, 1.15)	0.212	0.85 (0.55, 1.30)	0.445
Non-SSRI AD	41 (36.62)	Reference		Reference		Reference	
Readmission with depression							
SSRI AD	41 (16.27)	0.85 (0.49, 1.48)	0.562	0.89 (0.50, 1.58)	0.696	0.77 (0.42, 1.41)	0.391
Non-SSRI AD	20 (17.91)	Reference		Reference		Reference	
Readmission with sepsis							
SSRI AD	24 (9.51)	0.84 (0.41, 1.75)	0.65	0.85 (0.40, 1.80)	0.674	0.87 (0.41, 1.82)	0.712
Non-SSRI AD	12 (10.71)	Reference		Reference		Reference	
		Mean (SD)	Difference (95% CI) P Value	Difference (95% CI) P Value	Difference (95% CI) P Value		
Home-time, days							
SSRI AD	284.0 (123.6)	13.2 (-13.3, 39.6)	0.333	13.4 (-12.9, 39.6)	0.32	6.5 (-22.3, 35.4)	0.658
Non-SSRI AD	276.0 (128.7)	Reference		Reference		Reference	

Supplementary Table S4: AD use and clinical outcomes at one year post IS discharge by subgroups.

Outcomes at One Year	Unadjusted		Weight Adjusted		NIHSS Weight Adjusted	
	HR (95% CI)	P Value	HR (95% CI)	P Value	HR (95% CI)	P Value
Composite of mortality and all-cause readmission						
		<i>0.602</i>		<i>0.805</i>		<i>0.967</i>
Age ≥80y	1.22 (1.12, 1.34)	<0.001	1.19 (1.09, 1.30)	<0.001	1.16 (1.06, 1.28)	0.002
Age <80y	1.27 (1.15, 1.40)	<0.001	1.21 (1.09, 1.34)	<0.001	1.17 (1.04, 1.30)	0.006
		<i>0.828</i>		<i>0.799</i>		<i>0.987</i>
Female	1.22 (1.12, 1.32)	<0.001	1.18 (1.09, 1.28)	<0.001	1.16 (1.06, 1.27)	0.001
Male	1.23 (1.12, 1.36)	<0.001	1.20 (1.09, 1.33)	<0.001	1.16 (1.04, 1.29)	0.007
		<i>0.502</i>		<i>0.566</i>		<i>0.414</i>
White	1.22 (1.14, 1.31)	<0.001	1.18 (1.10, 1.26)	<0.001	1.15 (1.06, 1.23)	<0.001
Non-White	1.29 (1.11, 1.50)	<0.001	1.24 (1.06, 1.45)	0.007	1.23 (1.05, 1.44)	0.011
		<i>0.028</i>		<i>0.069</i>		<i>0.067</i>
NIHSS >4	1.10 (1.01, 1.20)	0.036	1.08 (0.99, 1.19)	0.073	1.09 (1.00, 1.19)	0.056
NIHSS ≤4	1.27 (1.15, 1.41)	<0.001	1.23 (1.11, 1.36)	<0.001	1.24 (1.12, 1.37)	<0.001
		<0.001		<0.001		<0.001
History of depression Yes	0.90 (0.76, 1.07)	0.234	0.88 (0.74, 1.04)	0.144	0.85 (0.71, 1.02)	0.085
History of depression No	1.26 (1.18, 1.35)	<0.001	1.25 (1.16, 1.33)	<0.001	1.22 (1.13, 1.31)	<0.001
CV readmission						
		<i>0.316</i>		<i>0.494</i>		<i>0.513</i>
Age ≥80y	1.04 (0.89, 1.21)	0.634	1.06 (0.91, 1.23)	0.454	1.03 (0.87, 1.21)	0.74
Age <80y	1.16 (1.00, 1.35)	0.044	1.15 (0.99, 1.33)	0.074	1.11 (0.95, 1.31)	0.182
		<i>0.279</i>		<i>0.316</i>		<i>0.507</i>
Female	1.05 (0.92, 1.20)	0.457	1.06 (0.92, 1.21)	0.416	1.04 (0.90, 1.21)	0.574
Male	1.18 (1.01, 1.37)	0.035	1.18 (1.01, 1.38)	0.038	1.13 (0.95, 1.33)	0.168
		<i>0.77</i>		<i>0.763</i>		<i>0.604</i>
White	1.11 (1.00, 1.24)	0.048	1.11 (1.00, 1.24)	0.054	1.09 (0.97, 1.23)	0.16
Non-White	1.07 (0.84, 1.37)	0.573	1.07 (0.84, 1.37)	0.592	1.01 (0.78, 1.31)	0.94
		<i>0.125</i>		<i>0.277</i>		<i>0.25</i>
NIHSS >4	0.98 (0.84, 1.14)	0.797	1.01 (0.86, 1.18)	0.945	1.01 (0.86, 1.18)	0.934
NIHSS ≤4	1.16 (1.00, 1.34)	0.052	1.14 (0.98, 1.32)	0.096	1.15 (0.99, 1.34)	0.076
		<i>0.865</i>		<i>0.995</i>		<i>0.907</i>

Outcomes at One Year	Unadjusted		Weight Adjusted		NIHSS Weight Adjusted	
	HR (95% CI)	P Value	HR (95% CI)	P Value	HR (95% CI)	P Value
History of depression Yes	1.14 (0.87, 1.49)	0.358	1.11 (0.84, 1.46)	0.467	1.09 (0.82, 1.47)	0.551
History of depression No	1.11 (0.99, 1.24)	0.066	1.11 (0.99, 1.23)	0.069	1.07 (0.95, 1.21)	0.242
IS/TIA readmission						
		0.06		0.058		0.022
Age ≥80y	0.88 (0.69, 1.13)	0.332	0.88 (0.68, 1.13)	0.32	0.80 (0.60, 1.05)	0.109
Age <80y	1.20 (0.99, 1.46)	0.067	1.20 (0.99, 1.47)	0.069	1.19 (0.96, 1.48)	0.105
		0.489		0.384		0.991
Female	1.03 (0.84, 1.27)	0.785	1.01 (0.81, 1.24)	0.962	1.02 (0.82, 1.27)	0.851
Male	1.15 (0.92, 1.43)	0.229	1.15 (0.92, 1.44)	0.213	1.02 (0.79, 1.32)	0.86
		0.537		0.733		0.674
White	1.09 (0.93, 1.29)	0.294	1.08 (0.91, 1.28)	0.378	1.04 (0.86, 1.25)	0.688
Non-White	0.96 (0.67, 1.39)	0.844	1.01 (0.70, 1.45)	0.973	0.94 (0.61, 1.44)	0.776
		0.51		0.731		0.696
NIHSS >4	0.97 (0.77, 1.23)	0.818	0.99 (0.78, 1.26)	0.954	0.99 (0.78, 1.25)	0.925
NIHSS ≤4	1.08 (0.86, 1.36)	0.495	1.05 (0.83, 1.33)	0.673	1.06 (0.84, 1.33)	0.651
		0.421		0.563		0.423
History of depression Yes	1.27 (0.84, 1.92)	0.258	1.20 (0.79, 1.84)	0.395	1.22 (0.77, 1.92)	0.391
History of depression No	1.06 (0.89, 1.25)	0.535	1.05 (0.89, 1.24)	0.581	1.00 (0.83, 1.20)	0.963
ICH readmission						
		0.361		0.542		0.517
Age ≥80y	1.49 (0.78, 2.86)	0.232	1.25 (0.63, 2.45)	0.524	1.19 (0.57, 2.45)	0.647
Age <80y	0.97 (0.50, 1.87)	0.924	0.93 (0.47, 1.82)	0.822	0.83 (0.39, 1.80)	0.645
		0.231		0.252		0.099
Female	1.49 (0.85, 2.60)	0.165	1.32 (0.74, 2.35)	0.342	1.38 (0.75, 2.54)	0.305
Male	0.77 (0.31, 1.90)	0.573	0.70 (0.28, 1.74)	0.441	0.45 (0.14, 1.46)	0.182
		0.292		0.379		0.201
White	1.03 (0.57, 1.87)	0.911	0.92 (0.51, 1.69)	0.798	0.80 (0.41, 1.56)	0.507
Non-White	1.77 (0.81, 3.88)	0.154	1.46 (0.65, 3.26)	0.356	1.65 (0.69, 3.95)	0.26
		0.663		0.726		0.788
NIHSS >4	1.19 (0.64, 2.22)	0.588	1.04 (0.55, 1.98)	0.904	1.04 (0.54, 1.98)	0.915
NIHSS ≤4	0.93 (0.38, 2.27)	0.878	0.85 (0.34, 2.12)	0.73	0.89 (0.36, 2.21)	0.798
		0.519		0.499		0.626
History of depression Yes	0.78 (0.25, 2.44)	0.67	0.74 (0.24, 2.33)	0.613	0.76 (0.24, 2.44)	0.644

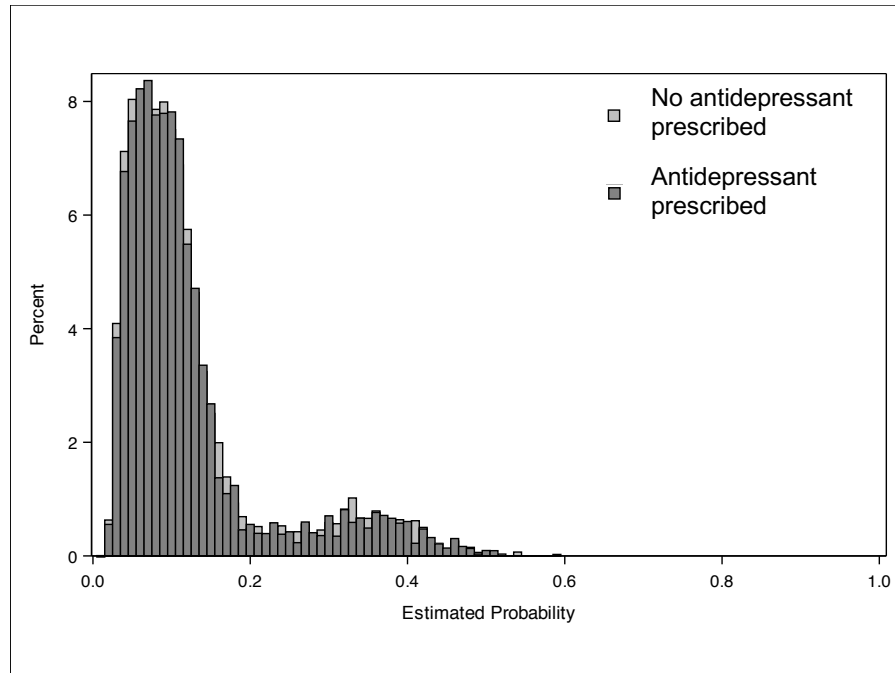
Outcomes at One Year	Unadjusted		Weight Adjusted		NIHSS Weight Adjusted	
	HR (95% CI)	P Value	HR (95% CI)	P Value	HR (95% CI)	P Value
History of depression No	1.18 (0.70, 1.97)	0.539	1.14 (0.68, 1.92)	0.608	1.05 (0.59, 1.86)	0.876
Non-CV readmission						
		<i>0.737</i>		<i>0.946</i>		<i>0.882</i>
Age ≥80y	1.27 (1.14, 1.42)	<0.001	1.22 (1.09, 1.36)	<0.001	1.17 (1.04, 1.32)	0.008
Age <80y	1.30 (1.17, 1.45)	<0.001	1.21 (1.09, 1.34)	<0.001	1.19 (1.05, 1.34)	0.005
		<i>0.447</i>		<i>0.317</i>		<i>0.314</i>
Female	1.23 (1.11, 1.35)	<0.001	1.17 (1.06, 1.29)	0.002	1.14 (1.02, 1.27)	0.02
Male	1.30 (1.16, 1.47)	<0.001	1.26 (1.12, 1.42)	<0.001	1.24 (1.09, 1.41)	0.001
		<i>0.197</i>		<i>0.283</i>		<i>0.125</i>
White	1.25 (1.15, 1.35)	<0.001	1.18 (1.08, 1.28)	<0.001	1.14 (1.04, 1.25)	0.005
Non-White	1.41 (1.19, 1.66)	<0.001	1.31 (1.10, 1.55)	0.002	1.34 (1.11, 1.61)	0.002
		<i>0.1</i>		<i>0.208</i>		<i>0.211</i>
NIHSS >4	1.14 (1.02, 1.27)	0.022	1.11 (0.99, 1.24)	0.08	1.11 (1.00, 1.25)	0.057
NIHSS ≤4	1.31 (1.16, 1.48)	<0.001	1.23 (1.09, 1.40)	0.001	1.24 (1.09, 1.41)	<0.001
		<i>0.002</i>		<i>0.002</i>		<i>0.002</i>
History of depression Yes	0.90 (0.73, 1.11)	0.329	0.88 (0.71, 1.09)	0.235	0.84 (0.67, 1.06)	0.141
History of depression No	1.28 (1.18, 1.39)	<0.001	1.26 (1.16, 1.37)	<0.001	1.24 (1.13, 1.35)	<0.001
Readmission with depression						
		<i>0.579</i>		<i>0.652</i>		<i>0.602</i>
Age ≥80y	3.66 (3.09, 4.35)	<0.001	2.45 (2.04, 2.96)	<0.001	2.41 (1.96, 2.95)	<0.001
Age <80y	3.43 (2.90, 4.04)	<0.001	2.31 (1.94, 2.75)	<0.001	2.24 (1.86, 2.69)	<0.001
		<i>0.013</i>		<i>0.011</i>		<i>0.0582</i>
Female	3.09 (2.66, 3.59)	<0.001	2.10 (1.79, 2.47)	<0.001	2.10 (1.77, 2.49)	<0.001
Male	4.21 (3.46, 5.12)	<0.001	2.94 (2.40, 3.61)	<0.001	2.75 (2.20, 3.44)	<0.001
		<i>0.577</i>		<i>0.951</i>		<i>0.584</i>
White	3.47 (3.06, 3.94)	<0.001	2.37 (2.07, 2.71)	<0.001	2.27 (1.96, 2.63)	<0.001
Non-White	3.82 (2.78, 5.25)	<0.001	2.40 (1.73, 3.32)	<0.001	2.51 (1.80, 3.51)	<0.001
		<i>0.024</i>		<i>0.195</i>		<i>0.28</i>
NIHSS >4	2.96 (2.49, 3.52)	<0.001	2.12 (1.75, 2.56)	<0.001	2.15 (1.78, 2.60)	<0.001
NIHSS ≤4	3.98 (3.30, 4.81)	<0.001	2.54 (2.08, 3.10)	<0.001	2.51 (2.05, 3.06)	<0.001
		<0.001		<0.001		<0.001
History of depression Yes	1.04 (0.80, 1.35)	0.775	1.02 (0.79, 1.32)	0.883	0.99 (0.76, 1.30)	0.956

Outcomes at One Year	Unadjusted		Weight Adjusted		NIHSS Weight Adjusted	
	HR (95% CI)	P Value	HR (95% CI)	P Value	HR (95% CI)	P Value
History of depression No	3.59 (3.13, 4.12)	<0.001	3.27 (2.84, 3.76)	<0.001	3.20 (2.75, 3.72)	<0.001
Readmission with sepsis						
		0.847		0.829		0.927
Age ≥80y	1.45 (1.18, 1.78)	<0.001	1.40 (1.13, 1.74)	0.002	1.35 (1.08, 1.70)	0.01
Age <80y	1.49 (1.23, 1.82)	<0.001	1.36 (1.11, 1.66)	0.003	1.37 (1.09, 1.72)	0.006
		0.426		0.518		0.306
Female	1.40 (1.15, 1.70)	<0.001	1.32 (1.08, 1.61)	0.007	1.27 (1.02, 1.58)	0.035
Male	1.58 (1.28, 1.95)	<0.001	1.46 (1.17, 1.80)	<0.001	1.49 (1.19, 1.87)	<0.001
		0.816		0.792		0.168
White	1.48 (1.27, 1.71)	<0.001	1.36 (1.17, 1.59)	<0.001	1.29 (1.08, 1.53)	0.004
Non-White	1.53 (1.15, 2.03)	0.003	1.42 (1.06, 1.90)	0.018	1.64 (1.20, 2.23)	0.002
		0.236		0.294		0.323
NIHSS >4	1.28 (1.07, 1.55)	0.009	1.24 (1.03, 1.50)	0.025	1.28 (1.06, 1.54)	0.01
NIHSS ≤4	1.54 (1.21, 1.97)	<0.001	1.46 (1.14, 1.88)	0.003	1.49 (1.16, 1.92)	0.002
		0.005		0.004		0.011
History of depression Yes	0.80 (0.52, 1.23)	0.304	0.76 (0.49, 1.17)	0.208	0.78 (0.49, 1.24)	0.292
History of depression No	1.55 (1.34, 1.79)	<0.001	1.51 (1.30, 1.75)	<0.001	1.49 (1.26, 1.75)	<0.001
Home-Time within 1y post IS discharge, days						
		0.221		<0.001		<0.001
Age ≥80y	-27.2 (-34.4, -19.9)	<0.001	-32.8 (-38.8, -26.8)	<0.001	-30.9 (-37.4, -24.4)	<0.001
Age <80y	-24.8 (-32.6, -16.9)	<0.001	-22.6 (-29.5, -15.7)	<0.001	-19.1 (-26.7, -11.4)	<0.001
		0.944		0.438		0.079
Female	-23.1 (-29.9, -16.4)	<0.001	-28.0 (-33.9, -22.0)	<0.001	-27.1 (-33.5, -20.6)	<0.001
Male	-23.7 (-32.4, -14.9)	<0.001	-26.5 (-33.5, -19.5)	<0.001	-21.7 (-29.4, -14.0)	<0.001
		0.416		0.324		0.955
White	-23.6 (-29.5, -17.6)	<0.001	-26.9 (-32.6, -21.3)	<0.001	-25.4 (-31.5, -19.2)	<0.001
Non-White	-28.7 (-41.3, -16.2)	<0.001	-30.8 (-40.0, -21.5)	<0.001	-24.9 (-35.1, -14.8)	<0.001
		0.033		0.021		0.021
NIHSS >4	-10.0 (-17.3, -2.7)	0.008	-17.7 (-24.1, -11.4)	<0.001	-17.9 (-24.1, -11.6)	<0.001
NIHSS ≤4	-26.0 (-35.0, -17.0)	<0.001	-31.3 (-38.8, -23.7)	<0.001	-31.5 (-39.3, -23.8)	<0.001
		<0.001		<0.001		<0.001

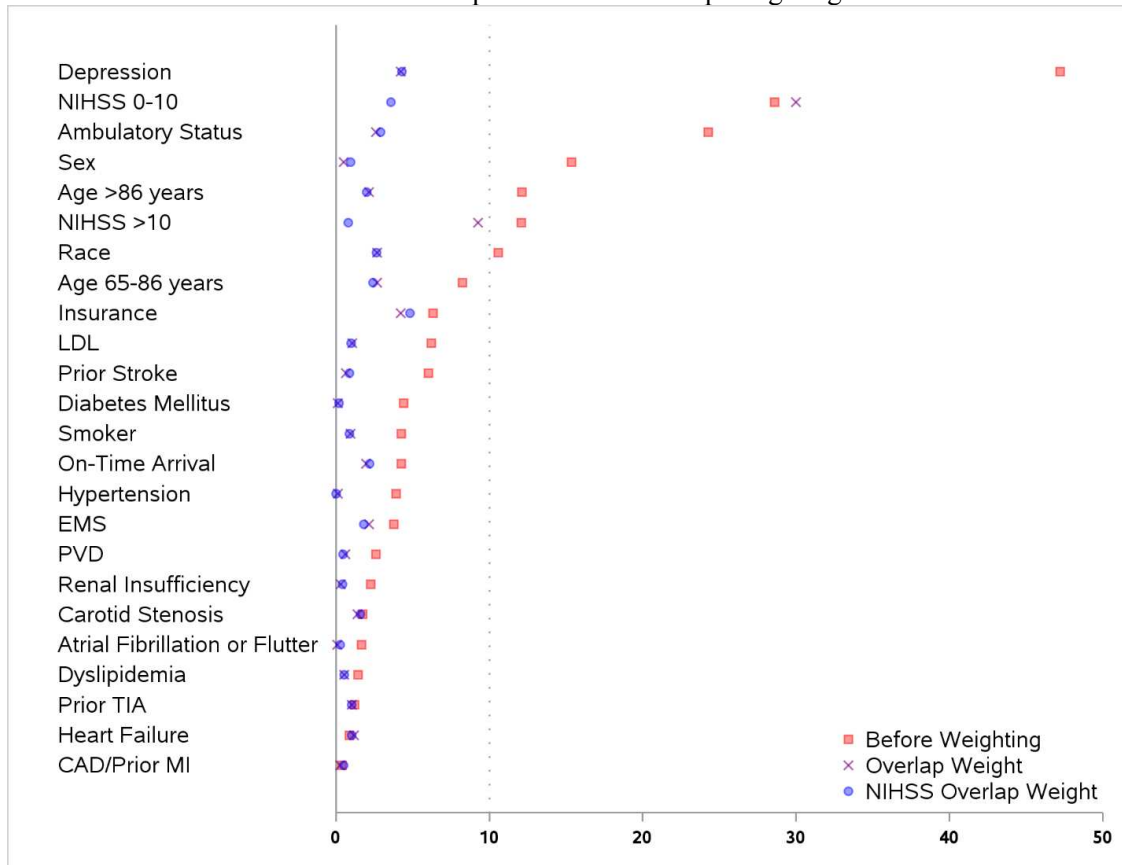
Outcomes at One Year	Unadjusted		Weight Adjusted		NIHSS Weight Adjusted	
	HR (95% CI)	P Value	HR (95% CI)	P Value	HR (95% CI)	P Value
History of depression Yes	3.2 (-11.9, 18.3)	0.681	3.1 (-7.2, 13.4)	0.553	6.6 (-4.6, 17.8)	0.249
History of depression No	-27.4 (-33.2, -21.5)	<0.001	-32.3 (-37.9, -26.7)	<0.001	-30.3 (-36.4, -24.3)	<0.001

Italics denotes *P* value for the interaction of AD use and outcomes between subgroups.

Supplementary Figure S1: Weight-adjusted propensity model for estimated probability of AD treatment.



Supplementary Figure S2: Propensity model for absolute standardized differences in the clinical variables before and after overlap and NIHSS overlap weighting.



Supplementary Figure S3: Cumulative incidence plots for 1 year follow-up readmission outcomes in AD naïve patients for A) composite mortality/readmission; B) ICH readmission; and C) sepsis readmission.

