

# **SUPPLEMENTAL MATERIAL**

**Table S1. ICD-9 and ICD-10 Code Based Definitions Applied to Medicare Part A Claims to Identify Specific Conditions.**

Clinical Condition	ICD-9 CM Codes	ICD-10 CM Codes <sup>a</sup>
Atrial fibrillation/flutter <sup>1,*</sup>	42731, 42732	I480, I481, I482, I483, I484, I4891, I4892
Ischemic stroke <sup>2</sup>	43301, 43311, 43321, 43331, 43381, 43391, 43401, 43411, 43491, 436	I6302, I6312, I6322, I63239, I63232, I63231, I63139, I63132, I63131, I63039, I63032, I63031, I63011, I63012, I63019, I63111, I63112, I63119, I63211, I63212, I63219, I6359, I6319, I6309, I6329, I6320, I6310, I6300, I6330, I63311, I63312, I63319, I63321, I63322, I63329, I63331, I63332, I63339, I63341, I63342, I63349, I6339, I636, I6349, I63449, I63442, I63441, I63439, I69432, I69431, I63429, I63422, I63421, I63419, I63412, I63411, I63430, I6350, I63511, I63512, I63519, I63521, I63529, I63531, I63532, I63539, I63541, I63542, I63549, I6359, I638, I639, I6789
Intracranial hemorrhage <sup>3</sup>	430, 431, 4320, 4321, 4329	I609, I608, I607, I606, I6052, I6051, I6050, I604, I6032, I6031, I6030, I6022, I6021, I6020, I6012, I6011, I6010, I6002, I6001, I6000, I610, I611, I612, I613, I614, I615, I616, I618, I619, I621, I6200, I6201, I6202, I6203, I629
Extracranial bleeding <sup>3</sup>	In primary position alone: 5310, 5312, 5314, 5316, 5320, 5322, 5324, 5326, 5330, 5332, 5334, 5336, 5340, 5342, 5344, 5346, 53501, 53511, 53521, 53531, 53541, 53551, 53561, 53783, 4560, 45620, 5307, 53082, 5780, 4552, 4555, 4558, 56202, 56203, 56212, 56213, 56881, 5693, 56985, 5781, 5789, 59381, 5997, 6238, 6262, 6266, 4230, 4590, 56881, 7191, 7847, 7848, 7863  In primary position, with above code in secondary position: 5311, 5313, 5315, 5317, 5319, 5321, 5323, 5325, 5327, 5329, 5331, 5333, 5335, 5337, 5339, 5341, 5343, 5345, 5347, 5349, 53500, 53510, 53520, 53530, 53540, 53550, 53560, 455, 56200, 56201, 56210, 56211, 5301, 2800, 2851, 2859, 79092	In primary position alone: K252, K254, K256, K260, K262, K264, K266, K270, K272, K274, K276, K280, K282, K284, K286, K2901, K2931, K2941, K2951, K2961, K2921, K2971, K2981, K2991, K31811, I8501, I8511, K226, K228, K920, K648, K643, K642, K641 K640, K5711, K5751, K5753, K5741, K5713, K5701, K5791, K5731, K5793, K5781, K5733, K5721, K661, K625, K5521, K921, K922, N280, R310, R311, R312, R319, N898, N920, N921, I312, R58, M2500, M25011, M25012, M25019, M25021, M25022, M25029, M25031, M25032, M25039, M25041, M25042, M25049, M25051, M25052, M25059, M25061, M25062, M25069, M25071, M25072, M25073, M25074, M25075, M25076, M2508, R040, R041, R042, R0481, R0489, R049  In primary position, with above code in secondary position: K251, K253, K255, K257, K259, K261, K263, K265, K267, K269, K271, K273, K275, K277, K279, K281, K283, K285, K287, K289, K2900, K2930, K2960, K2920, K2930, K2970, K2980, K640, K641, K642, K643, K644, K645, K648,

		K649, K5750, K5710, K5752, K5740, K5712, K5700, K5730, K5790, K5792, K5780, K5732, K5720, K210, K209, K208, K200, D800, D62, D649, R791
Chronic renal insufficiency <sup>4</sup>	582, 583, 585, 586, 587	M3218, M3214, M3504, N050, N051, N052, N053, N054, N055, N056, N057, N058, N059, N060, N061, N062, N063, N064, N065, N066, N067, N068, N069, N070, N071, N072, N073, N074, N075, N076, N077, N078, N079, N08, N140, N142, N144, N150, N158, N159, N171, N16, N170, N172, N178, N179, N181, N182, N183, N184, N185, N186, N189, N19, N261, N269

\*ICD-9 CM code based algorithms were converted to ICD-10 CM codes using the 2016 General Equivalence Mappings available from the Centers for Medicare and Medicaid Services at <https://www.cms.gov/Medicare/Coding/ICD10/2016-ICD-10-CM-and-GEMs.html>

**Table S2. Percentage of Residents Treated with Oral Anticoagulants by Race/Ethnicity.**

<b>Time Period</b>	<b>Overall</b>	<b>White</b>	<b>Black</b>	<b>Hispanic</b>	<b>API</b>	<b>Other/Unknown</b>
<b>First half 2011</b>						
n	17,895	15,404	1,421	688	257	125
Treated, %	42.4	42.6	41.5	42.4	32.7	43.5
<b>Second half 2011</b>						
n	33,959	29,268	2,623	1,316	530	222
Treated, %	42.3	42.8	40.3	39.7	31.7	39.9
<b>First half 2012</b>						
n	33,493	28,766	2,690	1,297	507	233
Treated, %	43.1	43.4	43.1	40.2	35.7	44.6
<b>Second half 2012</b>						
n	33,956	29,062	2,724	1,357	554	269
Treated, %	42.8	43.2	42.0	39.9	32.9	37.8
<b>First half 2013*</b>						
n	35,709	30,532	2,836	1,371	571	283
Treated, %	42.7	43.2	40.6	40.8	31.4	40.7
<b>Second half 2013*</b>						
n	37,118	31,524	2,926	1,454	590	300
Treated, %	42.8	43.5	40.9	39.1	29.3	39.0
<b>First half 2014</b>						
n	36,183	30,808	3,041	1,425	587	322
Treated, %	43.7	44.4	42.3	39.4	30.7	41.3
<b>Second half 2014</b>						
n	36,379	31,013	3,035	1,407	585	339
Treated, %	44.3	44.8	43.0	40.9	32.3	41.3
<b>First half 2015</b>						
n	36,807	31,490	3,071	1,354	560	332
Treated, %	44.8	45.3	43.8	42.5	31.6	43.7
<b>Second half 2015</b>						
n	37,644	32,222	3,068	1,410	595	349
Treated, %	45.5	46.0	43.8	43.0	33.8	43.8
<b>First half 2016</b>						
n	37,474	31,801	3,228	1,489	601	355
Treated, %	47.0	47.4	47.7	42.9	37.6	43.7
<b>Second half 2016</b>						
n	37,787	31,985	3,255	1,578	608	361
Treated, %	47.8	48.3	46.5	42.3	36.7	54.3

\*Race/ethnicity missing for 116 residents in the first half of 2013 and 324 residents in the second half of 2013  
Abbreviations: Asian or Pacific Islander (API).

### Supplemental References:

1. Centers for Medicare and Medicaid Services (CMS). 2016 ICD-10-CM and GEMs. Accessed September 5, 2018 from <https://www.cms.gov/Medicare/Coding/ICD10/2016-ICD-10-CM-and-GEMs.html>.
2. Kumamaru H, Judd SE, Curtis JR, Ramachandran R, Hardy NC, Rhodes JD, Safford MM, Kissela BM, Howard G, Jalbert JJ, Brott TG, Setoguchi S. Validity of claims-based stroke algorithms in contemporary medicare data: Reasons for geographic and racial differences in stroke (REGARDS) study linked with medicare claims. *Circ Cardiovasc Qual Outcomes*. 2014;7:611-619.
3. Cunningham A, Stein CM, Chung CP, Daugherty JR, Smalley WE, Ray WA. An automated database case definition for serious bleeding related to oral anticoagulant use. *Pharmacoepidemiol Drug Saf*. 2011;20:560-6.
4. Winkelmayr WC, Schneeweiss S, Mogun H, Patrick AR, Avorn J, Solomon DH. Identification of individuals with CKD from Medicare claims data: a validation study. *Am J Kidney Dis*. 2005;46:225-32.