

## Supplemental Online Content

Rymer JA, Chiswell K, Young L, et al. Analysis of oral anticoagulant dosing and adherence to therapy among patients with nonvalvular atrial fibrillation. *JAMA Netw Open*. 2023;6(6):e2317156. doi:10.1001/jamanetworkopen.2023.17156

**eFigure.** Consort Diagram Describing the Final Analytic Population

**eTable 1.** Dosing Definitions Used for Various Oral Anticoagulants

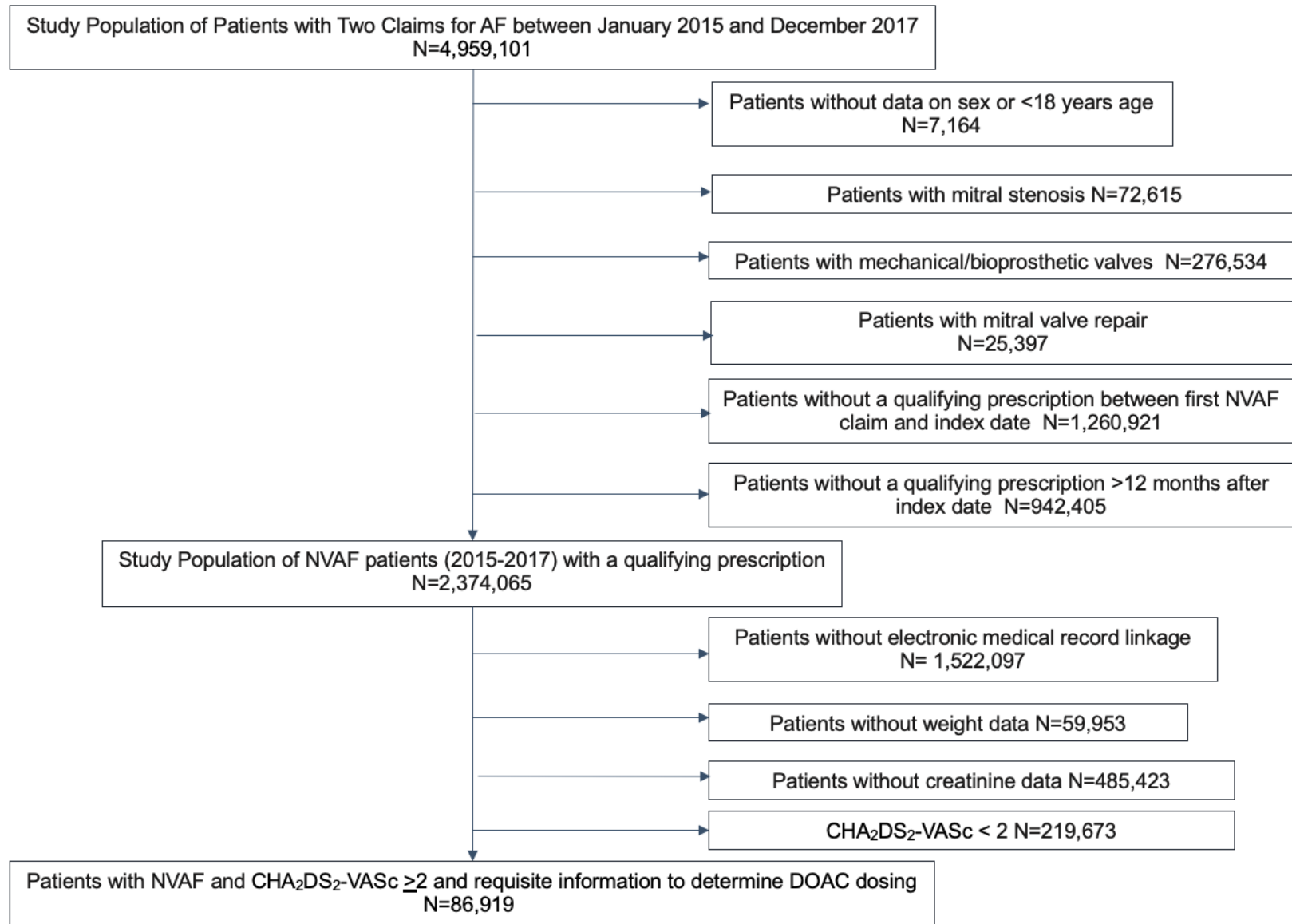
**eTable 2.** Diagnosis Codes Used for Bleeding and Stroke/TIA Outcomes

**eTable 3.** Covariates Adjusted for During Statistical Analysis

**eTable 4.** Proportion of Patients on Various Oral Anticoagulant Medications by CHA<sub>2</sub>DS<sub>2</sub>-VASc Score

This supplemental material has been provided by the authors to give readers additional information about their work.

**eFigure. Consort Diagram Describing the Final Analytic Population**



**eTable 1. Dosing Definitions Used for Various Oral Anticoagulants**

	<b>Off-Label Underdosing not consistent with FDA recommendations</b>	<b>Off-Label Excess Dosing not consistent with FDA recommendations</b>	<b>Appropriate Reduced Dose</b>	<b>Appropriate Full Dose</b>
<b>Apixaban</b>	<10 mg daily and <2 of the ABC criteria are fulfilled*	<ul style="list-style-type: none"> <li>• &gt;5 mg daily and 2 or more of the ABC criteria are fulfilled*</li> <li>• Individuals receiving &gt;5 mg twice daily</li> </ul>	5 mg daily and at least 2 of the ABC criteria are fulfilled*	Apixaban 10 mg daily and <2 of the ABC criteria are fulfilled*
<b>Rivaroxaban</b>	<20 mg daily and CrCl <sub>≥</sub> 50 ml/min	<ul style="list-style-type: none"> <li>• &gt;15 mg daily and a CrCl&lt;50 ml/min</li> <li>• Individuals receiving &gt;20 mg daily</li> </ul>	15 mg daily and CrCl <sub>≤</sub> 50 ml/min	20 mg daily and CrCl <sub>≥</sub> 50 ml/min
<b>Dabigatran</b>	<300 mg daily and CrCl <sub>≥</sub> 30 ml/min	<ul style="list-style-type: none"> <li>• &gt;150 mg daily and a CrCl&lt;30 ml/min</li> <li>• Individuals receiving more than 150 mg twice daily</li> </ul>	150 mg daily and CrCl <sub>≥</sub> 15 ml/min but less than ≤30 ml/min	300 mg daily and CrCl > 30 ml/min
<b>Edoxaban</b>	<60 mg daily and CrCl <sub>≥</sub> 50 ml/min	<ul style="list-style-type: none"> <li>• &gt;30 mg daily and a CrCl&lt;50 ml/min</li> <li>• Individuals receiving more than 60 mg daily</li> </ul>	30 mg daily and CrCl <sub>≥</sub> 15 ml/min but ≤50 ml/min	60 mg daily and CrCl >50 ml/min but ≤95 ml/min

\*ABC criteria: age<sub>≥</sub>80 years, body weight ≤60 kg, and creatinine ≥1.5 mg/dL. CrCl, creatinine clearance.

**eTable 2. Diagnosis Codes Used for Bleeding and Stroke/TIA Outcomes**

Outcome	Codes
Stroke/TIA	438.2, I69.113, I69.328, I65.21, 435.2, I66.03, I61.3, I69.01, I66.29, I66.02, I69.192, I69.934, I69.119, I69.198, I63.6, I69.318, I69.292, I66.12, I63.519, G46.1, 433, I63.111, 433.8, I69.864, I69.128, I63.02, I69.110, I63.219, I66.21, I69.121, I67.858, I69.343, I60.11, I66.22, I69.052, I65.1, I69.890, 434.1, 437.7, I69.194, I69.212
Bleeding	intracranial (430, 431, 432.x, 852.x, 853.x, 800.2x, 800.3x, 800.7x, 800.8x, 801.2x, 801.3x, 801.7x, 801.8x, 803.2x, 803.3x, 803.7x, 803.8x, 804.2x, 804.3x, 804.7x, 804.8x) or extra-cranial (423.0, 456.0, 456.20, 459.0, 530.21, 530.7, 530.82, 531.0x, 531.2x, 531.4x, 531.6x, 532.0x, 532.2x, 532.4x, 532.6x, 533.0x, 533.2x, 533.4x, 533.6x, 534.0x, 534.2x, 534.4x, 534.6x, 535.01, 535.11, 535.21, 535.31, 535.41, 535.51, 535.61, 535.71, 537.83, 537.84, 562.02, 562.03, 562.12, 562.13, 568.81, 569.3, 569.85, 578.x, 596.7, 599.71, 719.1x, 784.8, 786.3)

TIA, transient ischemic attack.

**eTable 3. Covariates Adjusted for During Statistical Analysis**

Covariates adjusted for in the multivariable logistic regression models examining factors associated with underdosed and excess-dosed DOACs	Age, sex, race, weight, ethnicity, median income, payor (i.e. private, government, uninsured), hypertension, coronary artery disease, peripheral artery disease, prior congestive heart failure (CHF), recent percutaneous coronary intervention (PCI) within 6 months, prior coronary artery bypass graft (CABG), recent thromboembolism within 6 months, liver disease, dementia, diabetes, prior cerebral vascular accident (CVA) or transient ischemic attack (TIA), hospitalization for bleeding, hospitalization for fall, prior intracranial hemorrhage, anemia, dialysis, prescriber specialty.
Covariates adjusted for in the multivariate logistic regression with CrCL as a continuous independent variable	Age, sex, race, weight, ethnicity, median income, payor (i.e. private, government, uninsured), hypertension, coronary artery disease, peripheral artery disease, prior congestive heart failure (CHF), recent percutaneous coronary intervention (PCI) within 6 months, prior coronary artery bypass graft (CABG), , liver disease, dementia, diabetes, prior cerebral vascular accident (CVA) or transient ischemic attack (TIA), hospitalization for bleeding, prior intracranial hemorrhage, anemia, dialysis.

CrCl, creatinine clearance; DOACs, direct oral anticoagulants.

**eTable 4. Proportion of Patients on Various Oral Anticoagulant Medications by CHA<sub>2</sub>DS<sub>2</sub>-VASc Score**

<b>CHA<sub>2</sub>DS<sub>2</sub>- VASc score</b>	<b>N</b>	<b>No Anticoagulation (N=1,002,358) %</b>	<b>Warfarin (N=521,052) %</b>	<b>Apixaban (N=454,622) %</b>	<b>Rivaroxaban (N=311,689) %</b>	<b>Dabigatran (N=80,615) %</b>	<b>Edoxaban (N=3,729) %</b>
0	49,889	3.5	0.6	1.2	1.7	0.8	1.6
1	159,675	9.8	2.7	5.1	6.5	4.6	7.7
2	277,847	13.1	8.2	11.2	13.7	11.7	15.7
3	400,272	16.4	16.4	16.7	18.8	18.3	18.4
4	461,161	18.0	21.8	19.4	19.8	20.6	18.7
5	397,077	15.0	19.8	17.3	16.0	17.4	15.7
6	300,102	11.5	14.8	13.5	11.6	13.1	10.9
7	197,898	7.7	9.5	9.2	7.3	8.2	7.2
8	102,670	4.0	4.9	5.0	3.6	4.1	3.1
9	27,474	1.1	1.2	1.4	1.0	1.0	1.0