## **Supplemental Material**

Table S1. Clinical outcomes and Adverse Events (AEs)

	Usual Care (N=506)	Tool Intervention (N=495)	P-value
Patients with at least 1 clinical outcome n (%)	13 (2.6%)	21 (4.2%)	0.16
Number of clinical outcome events, n	18*	22 <sup>†</sup>	
Major bleeding events, n	6	1	
Transient ischemic attack, n	0	1	
Myocardial infarction, n	0	0	
Pulmonary embolus, n	0	0	
Deep vein thrombosis, n	0	0	

<sup>\*</sup> One patient in UC arm had 4 incidences of major bleeding and 1 incidence of minor bleeding

<sup>&</sup>lt;sup>†</sup> One patient in SDM arm had 2 incidences of minor bleeding

Table S2. Clinical outcomes and Adverse Events (AEs)

	Usual Care (N=506)	Tool Intervention (N=495)	P-value
Patients Experienced Any AEs, n (%)	58 (11.5%)	47 (9.5%)	0.35
Patients Experienced Serious AEs, n (%)	44 (8.7%)	31 (6.3%)	0.15
Number of Serious AEs, n	65	42	
Not-related and Expected, n	21	6	
Not-related and Unexpected, n	44	36	
Number of Death*	11	8	0.64

<sup>\*</sup>all death are unrelated and unexpected

Table S3. Anticoagulant decision at 1-month  ${\sf visit}^*$ 

1-month Visit	Usual Care (N=386)	Tool Intervention (N=368)	P-value
Current anticoagulant decision			0.50
I decided to take Warfarin (Coumadin)	29 (7.5%)	17 (4.6%)	
I decided to take Apixaban or Dabigatran or Edoxaban or Rivaroxaban	324 (83.9%)	321 (87.2%)	
I decided to take Aspirin or other antiplatelet agent for the purpose of stroke prevention	17 (4.4%)	14 (3.8%)	
I decided to not take a blood thinner	14 (3.6%)	15 (4.1%)	
I have not made a decision	2 (0.5%)	1 (0.3%)	

<sup>\*</sup>Data collected on or after protocol v4 1/26/2021

Table S4. Anticoagulant decision at 6-month  ${\sf visit}^*$ 

6-month Visit	Usual Care (N=439)	Tool Intervention (N=428)	P-value
Current anticoagulant decision			0.54
I decided to take Warfarin (Coumadin)	27 (6.2%)	21 (4.9%)	
I decided to take Apixaban or Dabigatran or Edoxaban or Rivaroxaban	360 (82.0%)	362 (84.6%)	
I decided to take Aspirin or other antiplatelet agent for the purpose of stroke prevention	28 (6.4%)	20 (4.7%)	
I decided to not take a blood thinner	22 (5.0%)	25 (5.8%)	
I have not made a decision	1 (0.2%)	0 (0.0%)	
Missing	1 (0.2%)	0 (0.0%)	

<sup>\*</sup>Data collected on or after protocol v4 1/26/2021

Table S5. Anticoagulant Medication Adherence at 1-Month  $\operatorname{Visit}^*$ 

1-Month Visit	Usual Care (N=372)	Tool Intervention (N=353)	P-value
Current anticoagulant Medication			0.080
Warfarin	29 (7.8%)	17 (4.8%)	
Apixaban	273 (73.4%)	261 (73.9%)	
Dabigatran	5 (1.3%)	3 (0.8%)	
Edoxaban	0 (0.0%)	0 (0.0%)	
Rivaroxaban	47 (12.6%)	57 (16.1%)	
Missing	18 (4.8%)	15 (4.2%)	
Doses of anticoagulant missed in the last week			0.43
0 doses	326 (87.6%)	306 (86.7%)	
1 dose	15 (4.0%)	20 (5.7%)	
2 doses	8 (2.2%)	7 (2.0%)	
3 doses	1 (0.3%)	1 (0.3%)	
4 doses	4 (1.1%)	2 (0.6%)	
5 doses	0 (0.0%)	1 (0.3%)	
6 doses	2 (0.5%)	2 (0.6%)	
Greater than or equal to 7 doses	3 (0.8%)	5 (1.4%)	
Missing	13 (3.5%)	9 (2.5%)	
Doses of anticoagulant missed in the last month			0.38
0 doses	293 (78.8%)	271 (76.8%)	
1-3 dose	48 (12.9%)	56 (15.9%)	
4-6 doses	11 (3.0%)	10 (2.8%)	
7-9 doses	0 (0.0%)	2 (0.6%)	
10 or more doses	7 (1.9%)	5 (1.4%)	
Missing	13 (3.5%)	9 (2.5%)	

<sup>\*</sup>Adherence data was collected after protocol amendment v4 on 01/26/2021 and were not available to all the trial participants.

Table S6. Anticoagulant Medication Adherence at 6-Month  $\operatorname{Visit}^*$ 

6-Month Visit	Usual Care (N=416)	Tool Intervention (N=403)	P-value
Current anticoagulant			0.19
Warfarin	27 (6.5%)	21 (5.2%)	
Apixaban	292 (70.2%)	284 (70.5%)	
Dabigatran	5 (1.2%)	4 (1.0%)	
Edoxaban	1 (0.2%)	0 (0.0%)	
Rivaroxaban	62 (14.9%)	75 (18.6%)	
Missing	29 (7.0%)	19 (4.7%)	
Doses of anticoagulant missed in the last week			0.56
0 doses	354 (85.1%)	345 (85.6%)	
1 dose	25 (6.0%)	24 (6.0%)	
2 doses	8 (1.9%)	7 (1.7%)	
3 doses	4 (1.0%)	4 (1.0%)	
4 doses	1 (0.2%)	3 (0.7%)	
5 doses	0 (0.0%)	0 (0.0%)	
6 doses	1 (0.2%)	3 (0.7%)	
Greater than or equal to 7 doses	1 (0.2%)	3 (0.7%)	
Missing	22 (5.3%)	14 (3.5%)	
Doses of anticoagulant missed in the last month			0.51
0 doses	299 (71.9%)	287 (71.2%)	
1-3 dose	75 (18.0%)	80 (19.9%)	
4-6 doses	11 (2.6%)	17 (4.2%)	
7-9 doses	6 (1.4%)	1 (0.2%)	
10 or more doses	3 (0.7%)	4 (1.0%)	
Missing	22 (5.3%)	14 (3.5%)	

<sup>\*</sup> Adherence data was collected after protocol amendment v4 on 01/26/2021 and were not available to all the trial participants.

Table S7: Analysis of Primary Endpoint Correction for Missing Data

	Usual Care (N=506)	Tool Intervention (N=495)	P-value
WMW U-test with Inverse Probability Weighting			0.012
Imputation by Median of Opposite Arm	14.1 (0.0 - 25.0)	12.5 (0.0 - 25.0)	0.018
WMW U-test with All Patients and using ties for all missing observations			0.0072