

Supplementary Table 1. Search strings.

Database	Search strategy strings
PubMed	<p>1 Atrial Fibrillation/ 66803 2 atrial fibrillation\$.ti,ab,kw,kf. 85617 3 Atrial Flutter/ 6236 4 (atrial flutter or heart atrium flutter).ti,ab,kw,kf. 6555 5 or/1-4 102059 6 exp renal insufficiency, chronic/ or exp kidney failure, chronic/ 129521 7(chronic kidney disease or chronic renal insufficiency or chronic kidney failure).ti,ab,kw,kf.70903 8 ckd.ti,ab,kw,kf. 38941 9 or/6-8 165210 10 5 and 9 1995 11 exp anticoagulants/ 237758 12 Rivaroxaban/ 4365 13 Rivaroxaban.ti,ab,kw,kf. 6766 14 Dabigatran/ 3703 15 Dabigatran.ti,ab,kw,kf. 5639 16 apixaban.ti,ab,kw,kf. 4506 17 edoxaban.ti,ab,kw,kf. 1835 18 (anticoagulant\$ or anti-coagulant\$).ti,ab,kw,kf. 74612 19 (xarelto or pradaxa or eliquis or lixiana).ti,ab,kw,kf. 319 20 (direct oral anticoag\$ or doacs or direct acting oral anticoag\$ or noval oral anticoag\$ or noacs).ti,ab,kw,kf.7742 21 exp Factor Xa Inhibitors/ 9210 22 Factor Xa Inhibitor\$.ti,ab,kw,kf. 2737 23 non-vitamin k antagonist\$.ti,ab,kw,kf. 1457 24 blood clotting factor 10a inhibitor\$.ti,ab,kw,kf. 0 25 oral thrombin inhibitor\$.ti,ab,kw,kf. 130 26 or/11-25 268316 27 10 and 26 703 28 Patient Compliance/ 60235 29 Medication Adherence/ 23356 30 ((medication\$ or drug\$ or therapy or treatment or therapeutic or regimen or anticoagulant\$ or anti-coagulant\$ or doacs or Rivaroxaban or Dabigatran or apixaban or edoxaban or factor Xa inhibitor\$ or non-vitamin K antagonist\$ or blood clotting factor 10a inhibitor\$) adj4 (adher\$ or complian\$ or comply or persist\$)).ti,ab,kw,kf. 92740 31 (patient\$ adj4 (adher\$ or complian\$ or comply or persist\$)).ti,ab,kw,kf. 91663 32 (adherence or persistence).ti,ab,kw,kf. 247965 33 compliance.ti,ab,kw,kf. 133926 34 drug dosage calculations/ or "off-label use"/ or exp medication errors/ 25133 35 (dose or doses or dosage\$ or dosing or overdosing or underdosing or off label or medication error\$).ti,ab,kw,kf.1612949 36 ad.fs. 1496909 37 or/29-36 3119410 38 28 and 37 281 39 exp Stroke/ 162305 40(stroke\$1 or cerebrovascular accident\$ or cva or cvas or brain vascular accident\$).ti,ab,kw,kf.305071 40 exp Hemorrhage/ 354766 41 (hemorrhage\$ or haemorrhage\$ or bleed\$).ti,ab,kw,kf. 425050 42 exp Mortality/ 419338 43(mortality or fatal\$ or death\$ or dying or die or surviv\$ or adverse outcome\$).ti,ab,kw,kf.2863576 43 or/39-44 3653436 44 38 and 45 254</p>
Embase	<p>1 exp atrial fibrillation/ 103921 2 atrial fibrillations\$.ti,ab,kw,kf. 152455 3 heart atrium flutter/ 15164 4 (heart atrium flutter or atrial flutter).ti,ab,kw,kf. 10735 5 or/1-4 187228 6 exp chronic kidney failure/ 128919 7(chronic kidney disease or chronic renal insufficiency or chronic kidney failure).ti,ab,kw,kf. 112313 8 ckd.ti,ab,kw,kf. 71648 9 or/6-8 199082 10 5 and 9 7240 11 exp anticoagulant agent/ 739287 12 rivaroxaban/ 23851 13 rivaroxaban.ti,ab,kw,kf. 1385814 dabigatran/ 16984 15 dabigatran.ti,ab,kw,kf. 11338 16 dabigatran etexilate/ 3383 17 apixaban/ 17369 18 apixaban.ti,ab,kw,kf. 9637 19 edoxaban/ 6538 20 edoxaban.ti,ab,kw,kf. 3365 21 (anticoagulant\$ or anti-coagulant\$).ti,ab,kw,kf. 111629 22 (xarelto or pradaxa or eliquis or lixiana).ti,ab,kw,kf. 794 23 (direct oral anticoag\$ or doacs or direct acting oral anticoag\$ or noval oral anticoag\$ or noacs).ti,ab,kw,kf. 14140 24 exp blood clotting factor 10a inhibitor/ 100239 25 (blood clotting factor 10a inhibitor\$ or factor Xa inhibitor\$).ti,ab,kw,kf.7250 26 non-vitamin k antagonist.ti,ab,kw,kf. 2058 27 oral thrombin inhibitors\$.ti,ab,kw,kf. 218 28 or/11-27 761947 29 10 and 28 2480 30 medication compliance/ 40952 31 patient compliance/ 144764 32 ((medication\$ or drug\$ or therapy or treatment or therapeutic or regimen or anticoagulant\$ or anti-coagulant\$ or doacs or Rivaroxaban or Dabigatran or apixaban or edoxaban or factor Xa inhibitor\$ or non-vitamin K antagonist\$ or blood clotting factor 10a inhibitor\$) adj4 (adher\$ or complian\$ or comply or persist\$)).ti,ab,kw,kf. 151428 33 (patient\$ adj4 (adher\$ or complian\$ or comply or persist\$)).ti,ab,kw,kf. 155859 34 (adherence or persistence).ti,ab,kw,kf. 350213 35 compliances.ti,ab,kw,kf. 214300 36 exp drug dose/ 745203 37 dose calculation/ 20986 38 exp medication error/ 21928 39 "off label drug use"/</p>

	<p>9239 40(dose or doses or dosage\$ or dosing or overdosing or underdosing or off label or medication error\$).ti,ab,kw,kf. 2293320 41 do.fs. 641293 42 or/30-41 3503195 43 29 and 42 674 44 exp cerebrovascular accident/ 271201 45(stroke\$1 or cerebrovascular accident\$ or cva or cvas or brain vascular accident\$).ti,ab,kw,kf. 487702 46 exp bleeding/ 1040630 47 (hemorrhage\$ or haemorrhage\$ or bleed\$).ti,ab,kw,kf. 627661 48 exp mortality/ or all-cause mortality/ 1261605 49 (mortality or fatal\$ or death\$ or dying or die or surviv\$ or adverse outcome\$).ti,ab,kw,kf. 4001313 50 or/44-49 544222151 43 and 50 555</p>
Cochrane	<p>#1 MeSH descriptor: [Atrial Fibrillation] this term only 5214 #2 ("atrial fibrillation" or "atrial fibrillations" or "heart atrium flutter"):TI,AB,KW 14446 #3 #1 or #2 14446 #4 MeSH descriptor: [Renal Insufficiency, Chronic] 2 tree(s) exploded 165 #5 MeSH descriptor: [Kidney Failure, Chronic] 2 tree(s) exploded 66 #6 ("chronic kidney disease" or "chronic renal insufficiency" or "chronic kidney failure"):TI,AB,KW 10251 #7 ckd:TI,AB,KW 6609 #8 #4 or #5 or #6 or #7 11888 #9 #3 and #8 264 #10 MeSH descriptor: [Anticoagulants] explode all trees 5014 #11 MeSH descriptor: [Rivaroxaban] this term only 662 #12 Rivaroxaban:TI,AB,KW 2016 #13 MeSH descriptor: [Dabigatran] this term only 348 #14 Dabigatran:TI,AB,KW 1117 #15 apixaban:TI,AB,KW 1100 #16 edoxaban:TI,AB,KW 654 #17 (anticoagulant* or anti-coagulant*):TI,AB,KW 11734 #18 (xarelto or pradaxa or eliquis or lixiana):TI,AB,KW 184 #19 ("direct oral" NEXT anticoag* or doacs or "direct acting oral" NEXT anticoag* or "noval oral" NEXT anticoag* or noacs):TI,AB,KW 820 #20 MeSH descriptor: [Factor Xa Inhibitors] this term only 636 #21 ("Factor Xa" NEXT Inhibitor*):TI,AB,KW 1035 #22 ("non vitamin k" NEXT antagonist*):TI,AB,KW 173 #23 ("blood clotting factor 10a" NEXT inhibitor*):TI,AB,KW 96 #24 (oral thrombin NEXT inhibitor*):TI,AB,KW 281 #25 #10 #11 or #12 or #13 or #14 or #15 or #16 3973 #26 #17 or #18 or #19 or #20 or #21 or #22 or #23 or #24 12723 #27 #26 or #27 14333 #28 #9 and #27 68 #29 MeSH descriptor: [Patient Compliance] this term only 10045 #30 MeSH descriptor: [Medication Adherence] this term only 2652 #31 ((medication* or drug* or therapy or treatment or therapeutic or regimen or anticoagulant* or anti-coagulant* or doacs or Rivaroxaban or Dabigatran or apixaban or edoxaban or "factor Xa inhibitor" or "factor Xa inhibitors" or "non vitamin K antagonist" or "non vitamin K antagonists" or "blood clotting factor 10a inhibitor" or "blood clotting factor 10a inhibitors") NEAR/4 (adher* or complian* or comply or persist*)):TI,AB,KW 31741 #32 (patient* NEAR/4 (adher* or complian* or comply or persist*)):TI,AB,KW 37173 #33 (adherence or persistence):TI,AB,KW 43219 #34 compliance:TI,AB,KW 51561 #35 MeSH descriptor: [Drug Dosage Calculations] this term only 234 #36 MeSH descriptor: [Off-Label Use] this term only 49 #37 (dose or doses or dosage* or dosing or overdosing or underdosing or "Off label" or off-label or medication NEXT error*):TI,AB,KW 482686 #38 MeSH descriptor: [] explode all trees and with qualifier(s): [administration & dosage - AD] 182063 #39 {or #29-#38} 549493 #40 #28 and #39 31 #41 MeSH descriptor: [Stroke] explode all trees 11630 #42 (stroke or strokes or cerebrovascular NEXT accident* or cva or cvas or "brain vascular" NEXT accident*):TI,AB,KW 66328 #43 MeSH descriptor: [Hemorrhage] explode all trees 15624 #44 (hemorrhage* or haemorrhage* or bleed*):TI,AB,KW 70061 #45 MeSH descriptor: [Mortality] explode all trees 14085</p>

	#46 (mortality or fatal* or death* or dying or die or surviv* or adverse NEXT outcome*):TI,AB,KW 247113 #47 #41 or #42 or #43 or #44 or #45 or #46 338826 #48 #40 and #47 in Cochrane Reviews, Cochrane Protocols, Trials 28
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