

Supplementary Materials

Table S1. NOAC-related keywords and keyword combinations used for NOAC-related events.

Characteristics	Keywords
NOACs	Anticoagulant, anti coagulant, anti-coagulant, NOAC, non-vitamin K, coagulation, xarelto, rivaroxaban, rivaroxiban, rivaroxaban, pradaxa, dabigatran, dabigitran, eliquis, eliquis, apixaban, apixiban, DOAC, blood thinner, novel anti, thrombin, factor Xa, factor 10a, new anticoagulant
Professional status of attendees	Cardiologist, general practitioner, nurse, pharmacist, haematologist, hematologist, registrar.
Indications	Atrial, stroke, thrombosis, venous, embolism, VTE, NVAf, DVT, haematology, hematology, cardiology.
Trials	ROCKET, ARISTOLTE, RE-LY, AMPLIFY, EINSTEIN, RE-MEDY, RE-SONATE, RE-COVER.

Table S2. Timeline of NOAC Therapeutic Goods Administration (TGA) registration (market approval)

Approved indication	TGA registration date
Rivaroxaban	
Prevention of venous thromboembolism in patients undergoing elective hip or total knee surgery (10 mg strength)	November 2008
Approved additional strengths (15 mg and 20 mg) for prevention of venous thromboembolism in patients undergoing elective hip or total knee surgery	April 2012
Prevention of stroke and systemic embolism in patients with non-valvular atrial fibrillation and at least one additional risk factor for stroke; Treatment of acute deep vein thrombosis; Prevention of recurring deep vein thrombosis and pulmonary embolism (15 mg and 20 mg)	May 2012
Prevention of cardiovascular death, myocardial infarction and stent thrombosis in patients following acute coronary syndrome in combination with aspirin alone or with a thienopyridine (2.5 mg).	Application withdrawn by sponsor*
Approved for treatment of pulmonary embolism (15 mg and 20 mg)	June 2013
Apixaban	
Prevention of venous thromboembolism in patients undergoing knee or hip replacement (2.5 mg)	July 2011
Prevention of stroke and systemic embolism in patients with non-valvular atrial fibrillation and at least one additional risk factor for stroke (5 mg)	May 2013
Treatment of acute deep vein thrombosis and pulmonary embolism; Prevention of recurring deep vein thrombosis and pulmonary embolism (2.5mg, 5 mg)	November 2015
Dabigatran	
Prevention of venous thromboembolism in patients undergoing knee or hip replacement (75 mg, 110 mg)	November 2008
Prevention of stroke and systemic embolism in patients with non-valvular atrial fibrillation and at least one additional risk factor for stroke (75 mg, 110 mg, 150 mg)	April 2011
Treatment of acute deep vein thrombosis and pulmonary embolism; Prevention of recurring deep vein thrombosis and pulmonary embolism (75 mg, 110 mg, 150 mg)	August 2015

*The Advisory Committee on Prescription Medicines (advisory body to the TGA) recommended rejection as a positive benefit-risk profile had not been established, but the application was withdrawn by the sponsor before the TGA made a formal decision.

Table S3. Timeline of major Pharmaceutical Benefits Advisory Committee (PBAC) recommendations and rejections for NOAC Pharmaceutical Benefits Scheme (PBS) subsidy

PBAC decision	PBAC decision date	PBS listing date
Rivaroxaban		
Recommended for the prevention of venous thromboembolism in patients undergoing knee or hip replacement	March 2009	August 2009
Recommended for the treatment of acute deep vein thrombosis without symptomatic pulmonary embolism, and prevention of recurrent venous thromboembolism	March 2012	December 2012
Rejected application for prevention of stroke or systemic embolism in patients with non-valvular atrial fibrillation.	March 2012	-
Rejected application for prevention of stroke or systemic embolism in patients with non-valvular atrial fibrillation who are inadequately controlled on warfarin or not suitable for warfarin.	November 2012	-
Recommended for prevention of stroke or systemic embolism in patients with non-valvular atrial fibrillation	March 2013	August 2013
Recommended for treatment of pulmonary embolism.	March 2013	August 2013
Apixaban		
Recommended for the prevention of venous thromboembolism in patients undergoing knee or hip replacement	July 2011	January 2012
Rejected application for prevention of stroke or systemic embolism in patients with non-valvular atrial fibrillation.	November 2012	-
Recommended for prevention of stroke or systemic embolism in patients with non-valvular atrial fibrillation	March 2013	September 2013

Recommended for treatment of
venous thromboembolism

March 2015

August 2015

Dabigatran

Recommended for the prevention
of venous thromboembolism in
patients undergoing knee or hip
replacement

November 2009

April 2010

Recommended for prevention of
stroke or systemic embolism in
patients with non-valvular atrial
fibrillation

March 2011*

September 2013

*Final decision deferred in response to the Therapeutic Goods Administration's Safety Advisory Alerts for dabigatran regarding bleeding-related adverse drug reactions (Oct 2011) and renal function monitoring requirements (Nov 2011). The March 2011 decision to recommend listing was affirmed in March 2013 following a PBAC review of anticoagulants in atrial fibrillation and provision of additional cost-effectiveness analyses by the manufacturer of dabigatran and the other NOACs.