Gloucestershire Hospitals
NHS Foundation Trust

Guidance on Converting Between Anticoagulants

From	To	Conversion recommendation
Dabigatran	Unfractionated heparin/LMWH	Stop dabigatran and start heparin infusion/LMWH 12 hours after the last dose of dabigatran was given. Click here for 'DOAC bridging' protocol
	Warfarin	CrCl ≥ 50mL/min – warfarin should be started 3 days before stopping dabigatran CrCl 30-50mL/min – warfarin should be started 2 days before stopping dabigatran. **NB:** interpret INR cautiously until dabigatran has been stopped for 2 days as it can increase the INR.
	Edoxaban/Rivaroxaban/Apixaban	Stop dabigatran and start edoxaban/ rivaroxaban/ apixaban at the time that the next scheduled dose of dabigatran would be due.

From	To	Conversion recommendation
Apixaban	Unfractionated heparin/LMWH	Stop apixaban and start heparin infusion/LMWH at the time the next dose of apixaban would be due. Click here for 'DOAC bridging' protocol
	Warfarin	Start warfarin and continue apixaban for at least 2 days until INR ≥ 2. Take blood sample for INR immediately before the apixaban dose is given.
	Dabigatran/Edoxaban/Rivaroxaban	Stop apixaban and start dabigatran/edoxaban/rivaroxaban at the time that the next scheduled dose of apixaban would be due.

From	To	Conversion recommendation
Edoxaban	Unfractionated heparin/LMWH	Stop edoxaban and start heparin infusion/LMWH at the time that the next scheduled dose of edoxaban would be due. Click here for 'DOAC bridging' protocol
	Warfarin	Halve the normal dose of edoxaban and start warfarin without loading. An appropriate warfarin dose is the patient's previous maintenance dose OR 3mg OD. Stop edoxaban once INR>2 or after 14 days, whichever is sooner. Take blood sample for INR immediately before the edoxaban dose is given. **OR** stop edoxaban and start warfarin AND treatment dose LMWH at the time that the next scheduled dose of edoxaban would be due.
	Dabigatran/Rivaroxaban/Apixaban	Stop edoxaban and start dabigatran/rivaroxaban/apixaban at the time that the next scheduled dose of edoxaban would be due.

From	To	Conversion recommendation
Rivaroxaban	Unfractionated heparin/LMWH	Stop rivaroxaban and start heparin infusion/LMWH at the time that the next scheduled dose of rivaroxaban would be due Click here for 'DOAC bridging' protocol
	Warfarin	Start warfarin in combination with rivaroxaban. Rivaroxaban should be stopped when INR is ≥2. Take blood sample for INR immediately before the rivaroxaban dose is given as rivaroxaban can increase the INR.
	Dabigatran/Edoxaban/Apixaban	Stop rivaroxaban and start dabigatran/edoxaban/apixaban at the time that the next scheduled dose of rivaroxaban would be due.

From	To	Conversion recommendation
Unfractionated Heparin Infusion	LMWH	Stop heparin infusion and start LMWH injection within 2 hours of stopping.
	Warfarin	Start warfarin and stop heparin infusion once INR is in therapeutic range for 2 consecutive days.
	Edoxaban *	Stop infusion and give the first dose of edoxaban 4 hours later
	Apixaban ** Dabigatran * Rivaroxaban ***	Give the first dose of dabigatran/rivaroxaban/apixaban at the same time as stopping the infusion.

From	To	Conversion recommendation
LMWH (Treatment dose)	Unfractionated heparin	Stop LMWH and start heparin infusion at the time that the next scheduled dose of LMWH would be due.
	Warfarin	Start warfarin and stop LMWH once INR is in therapeutic range for 2 consecutive days.
	Dabigatran * Rivaroxaban ***	Stop LMWH and start dabigatran/rivaroxaban 0-2 hours before the time that the next scheduled dose of LMWH would be due.
	Apixaban ** Edoxaban *	Stop LMWH and start edoxaban/apixaban at the time that the next scheduled dose of LMWH would be due.

From	To	Conversion recommendation
Warfarin	Unfractionated heparin	Stop warfarin and start heparin infusion when INR<2. Click here for 'warfarin bridging' protocol
	LMWH	DVT/PE: Stop warfarin and start treatment dose LMWH when INR <2. Prevention of stroke and systemic embolism: review risk and consider prophylactic or treatment dose LMWH once INR <2.
	Dabigatran/Apixaban	Stop warfarin and start dabigatran/apixaban as soon as INR <2.
	Edoxaban	Stop warfarin and start edoxaban as soon as INR ≤2.5.
	Rivaroxaban	DVT/PE: stop warfarin and start rivaroxaban once INR is ≤2.5. Prevention of stroke and systemic embolism: stop warfarin and start rivaroxaban once INR is ≤3.

Note:

*For the treatment of DVT/PE, patients should receive at least 5 days of parenteral anticoagulant before switching to either edoxaban or dabigatran.

**When switching to apixaban for the initial treatment of DVT/PE, patients must receive the full 7 day initiation dose (10mg BD) regardless of how many days of parenteral anticoagulation they have already received.

***When switching to rivaroxaban for the initial treatment of DVT/PE, the number of days the patient has already had of parenteral anticoagulation can be deducted from the 21 day initiation dose of 15mg BD.

Links:

For the management of patients on warfarin prior to surgical procedures please refer to **Warfarin 'bridging' Protocol: Management of Warfarin During Elective Procedures**.
https://www.gloshospitals.nhs.uk/gps/treatment-guidelines/warfarin-bridging-protocol/

For the management of patients on DOACs (Direct Oral Anticoagulants) prior to surgical procedures please refer to **DOAC 'bridging' Protocol: Newer Anticoagulants and Elective Procedures**.
https://www.gloshospitals.nhs.uk/gps/treatment-guidelines/doac-bridging-protocol/

For dosing instruction when initiating patients on warfarin please refer to **Warfarin Initiation Protocol Action Card**. https://www.gloshospitals.nhs.uk/gps/treatment-guidelines/a2095-war1-warfarin-initiation-protocol-policy/

References:

Can be provided on request from Medicines Information, Pharmacy, Gloucestershire Royal Hospital