High INR in patient without bleeding	Therapy			
	Considerations	Warfarin	Vitamin K	Measure INR
Supratherapeutic but < 4.5	If the INR is minimally elevated (< 10% above therapeutic range), consider that dose reduction may not be necessary.	Lower or omit the next dose of warfarin. Resume therapy at a lower dose when INR approaches therapeutic range.		
4.5 to 10		Stop warfarin and restart at a reduced dose once INR approaches the therapeutic range	If high bleeding risk*, or INR not falling on re-test, give 2 mg of phytomenadione (vitamin K)† orally	Within 24 hours. Closely monitor any INR ≥ 6 as bleeding risk increases exponentially
>10	If high bleeding risk*, consider requesting acute general medicine assessment, noting whether vitamin K has been given.	Stop warfarin and restart at a reduced dose once INR approaches the therapeutic range	If lower risk, give phytomenadione (vitamin K)† 2.5 mg to 5 mg orally	In 6 to 12 hours and then daily, until stable

***High bleeding risk:**

- A major bleed within the previous 4 weeks
- Surgery within the previous 2 weeks
- Platelet count less than 50 x 10^9/L
- Known liver disease
- Active gastrointestinal disorders
- Concurrent antiplatelet therapy
- Over-the-counter medications increasing bleeding risk (e.g. NSAIDs)

†Phytomenadione (vitamin K)

- For full prescribing details, see NZ Formulary – Phytomenadione
- For oral dosing, use the intravenous preparation. This is well absorbed from the mucous membrane.
- For small doses, consider using the paediatric ampoule (2 mg/0.2 mL).
- If higher dose required, use 10 mg/mL ampoule.

Vitamin K effect on INR can be expected within 6 to 12 hours.

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See Auckland Region HealthPathways "Warfarin Over-anticoagulation" for full pathway (https://aucklandregion.communityhealthpathways.org/30312.htm)