

Options for monitoring vitamin K antagonist anticoagulation therapy



This tool is intended for health professionals. Its purpose is to facilitate the discussion regarding the options for monitoring vitamin K antagonist anticoagulation therapy. It is provided for information purposes only and should not replace the clinician's judgement. It is based on the recommendations developed by INESSS in the [optimal use guides on direct oral anticoagulants and warfarin \(atrial fibrillation and venous thromboembolism\)](#) in adults. These guides are available in the INESSS'S GUIDES section of our website at [inesss.qc.ca](https://www.inesss.qc.ca).

In what situations should this dialogue be initiated?

- When consideration is being given to long-term vitamin K antagonist (VKA) therapy.
- When the patient (or his/her caregiver):
 - Wants to monitor the INR values him/herself;
 - Is physically and mentally capable of doing such monitoring properly;
 - Has access to a health professional who can follow the self-monitoring or support the patient in cases of self-management.
- The anticoagulation status of patients treated with a VKA should be monitored closely by checking the international normalized ratio (INR).
 - An INR that is too high carries an increased risk of bleeding;
 - An INR that is too low signifies a decrease in the treatment's effectiveness.

- For patients with antiphospholipid syndrome, anemia or a history of drug addiction, offering options other than standard monitoring is contraindicated because of the risk that the test result provided by the portable coagulometer may be affected.



Shared decision-making¹

It is essential that your patient fully understands the importance of this monitoring and that different options are available. The decision regarding the preferred option for monitoring VKA anticoagulation therapy will depend not only on the scientific data, but also on the patient's values and preferences. A shared decision is made after a conversation, between the health professional and the patient, in which all these elements are discussed.

1. For information on shared decision-making with your patient, view the video clip on our website [inesss.qc.ca](https://www.inesss.qc.ca).

Options to be explored with the patient

- In Québec, there are three options for monitoring VKA anticoagulation therapy:



OPTION 1: Standard monitoring

(management done entirely by a health professional)

- INR monitored by a health professional, generally on a monthly basis:
 - Specimen drawn at a hospital, specialized medical clinic or CLSC.
 - Test performed in a laboratory or with a portable coagulometer at a community pharmacy.
- A health professional adjusts the VKA dose as needed.



OPTION 2: Self-monitoring

- The patient measures his/her INR about once a week using a personal portable coagulometer.
 - If the INR value is outside the preestablished range, the patient informs the health professional who is providing the follow-up;
 - If the health professional deems it necessary, he/she adjusts the medication or orders a lab test to confirm the result.



OPTION 3: Self-management

- The patient measures his/her INR about once a week using a personal portable coagulometer.
 - If the INR value is outside the preestablished range, the patient adjusts his/her medication according to an algorithm predetermined by a health professional.

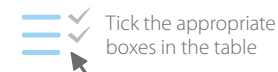


It is also important to inform your patient that those who opt to **self-monitor** or **self-manage** their VKA therapy must:

- Receive special, appropriate training;
- Be followed at least once a year by a physician. This includes external quality control of their coagulometer according to the manufacturer's recommendations.

Scientific studies indicate that self-monitoring and self-management are at least as effective and safe as standard monitoring. These results concern, among others, patients with a mechanical valve prosthesis.


What's important for your patient



- Discuss the pros and cons of each option in light of what is important to your patient. You can also discuss certain aspects that are not covered in this tool.

PROS	NOT IMPORTANT	IMPORTANT	CONS	NOT IMPORTANT	IMPORTANT
OPTION 1: Standard monitoring (management done entirely by a health professional)					
Monitoring managed entirely by a health professional			Regular trips to the hospital, clinic, CLSC or pharmacy		
No cost to the patient (fees for the services assumed by the RAMQ)			Regular blood draws for lab tests (and the waiting these draws involve)		
INR results accurate over a broad range of values			Costs assumed by the patient when the monitoring is done at a pharmacy (monitoring and VKA dose adjustment fees)		
OPTION 2: Self-monitoring					
Convenience of being able to perform an INR test anywhere			Cost of the portable coagulometer (about \$500) and strips		
Fewer intravenous blood samples for lab tests			Training required for proficient use of the portable coagulometer		
No time/schedule issues due to booking appointments			Requires a stronger commitment on the part of the patient to ensure optimal monitoring		
OPTION 3: Self-management					
Convenience of being able to perform an INR test anywhere			Cost of the portable coagulometer (about \$500) and strips		
Fewer intravenous blood samples for lab tests			Training required for proficient use of the portable coagulometer and the VKA dose adjustment algorithm		
No time/schedule issues due to booking appointments			Requires a stronger commitment on the part of the patient to ensure optimal monitoring		
Easy to increase the frequency of INR testing when taking a new medication or when the INR is less stable			Risk of making a dose adjustment error		

Does the patient feel ready to make a decision²?

 Tick the appropriate boxes in the table

- At the end of the discussion, ask your patient if he/she:

	YES	NO
1. Is sure about the best choice for him/her?	<input type="checkbox"/>	<input type="checkbox"/>
2. Feels that he/she has all the necessary information for making an informed decision?	<input type="checkbox"/>	<input type="checkbox"/>
3. Is clear about which benefits and harms matter most to him/her?	<input type="checkbox"/>	<input type="checkbox"/>
4. Has been given enough support and advice to make his/her decision?	<input type="checkbox"/>	<input type="checkbox"/>

2. Adapted from © SURE Test, O'Connor and Légaré, 2008.