



EDUCATIONAL MATERIALS FOR PHYSICIANS TO SUPPORT PATIENT INVOLVEMENT IN DECISION-MAKING

PROMOTING SHARED DECISION-MAKING FOR STROKE PREVENTION IN PATIENTS WITH ATRIAL FIBRILLATION AND INTRACEREBRAL HAEMORRHAGE



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INTRODUCTION

These educational materials have been designed to be used jointly by healthcare professionals and patients during consultations that address the topic of stroke prevention in patients with atrial fibrillation (AF) who have sustained an intracerebral haemorrhage (ICH) or other major bleeding event. The aim is to facilitate shared decision-making between healthcare professionals and patients and to promote patient understanding of their future stroke and bleeding risk.

CONTENTS

- Discussion aid
- Risk score calculators (CHA₂DS₂-VASc and HAS-BLED)
- Patient-centred discussion aid
- Managing the risk of oral anticoagulation-related bleeding: a patient guide
- Sources of information for patients
- Links to online video content on oral anticoagulation

This can be used to facilitate shared decision-making during clinical consultations and to help patients and clinicians identify relevant risk factors.

RISK FACTORS FOR ISCHAEMIC STROKE (SELECT AS APPROPRIATE)		RISK FACTORS FOR BLEEDING (SELECT AS APPROPRIATE)		OTHER RISKS TO CONSIDER (SELECT AS APPROPRIATE)	
Atrial fibrillation	<input type="checkbox"/>	Previous major bleeding	<input type="checkbox"/>	Poor INR control (for warfarin users)	<input type="checkbox"/>
		Gastrointestinal	<input type="checkbox"/>		
		Intracerebral	<input type="checkbox"/>		
		Intracranial	<input type="checkbox"/>		
Previous ischaemic stroke or transient ischaemic attack (mini stroke)	<input type="checkbox"/>	Long-term exposure to oral anticoagulants	<input type="checkbox"/>	Diabetes mellitus type 1 or 2	<input type="checkbox"/>
Vascular disease	<input type="checkbox"/>	Long-term exposure to aspirin, antiplatelets, or non-steroidal anti-inflammatory drugs	<input type="checkbox"/>	Age ≥80 years	<input type="checkbox"/>
Previous heart attack	<input type="checkbox"/>	Cerebral amyloid angiopathy	<input type="checkbox"/>	History of falls or increased risk of falls	<input type="checkbox"/>
Previous thrombo-embolic event (e.g. DVT)	<input type="checkbox"/>	Intracerebral micro-bleeds	<input type="checkbox"/>	Support required with use of oral anticoagulants (e.g. dosette box)	<input type="checkbox"/>
Poorly controlled hypertension	<input type="checkbox"/>	Poorly controlled hypertension	<input type="checkbox"/>	Reduced renal function	<input type="checkbox"/>
Lifestyle factors		Lifestyle factors		Active cancer	<input type="checkbox"/>
Smoking	<input type="checkbox"/>	Smoking	<input type="checkbox"/>		
Increased alcohol use	<input type="checkbox"/>	Increased alcohol use	<input type="checkbox"/>		
Overweight	<input type="checkbox"/>	Overweight	<input type="checkbox"/>		
Underweight	<input type="checkbox"/>	Underweight	<input type="checkbox"/>		

	CHA ₂ DS ₂ -VASC RISK SCORE (ISCHAEMIC STROKE)	DEFINITIONS	POINTS AWARDED
SCORE CALCULATION	Congestive heart failure	Clinical heart failure or LVEF <40%	+1
	Hypertension	Hypertension or on anti-hypertensive medications	+1
	Age ≥75 years		+2
	Diabetes mellitus	On hypoglycaemic drugs and/or insulin, or fasting glucose >7mmol/L (>125mg/dL)	+1
	Stroke	History of any stroke*, TIA, or thromboembolism	+2
	Vascular disease	Previous MI (heart attack), PAD, or aortic plaque	+1
	Age 65-74		+1
	Sex category	Female	+1
PATIENT'S TOTAL SCORE			
CONSIDERATIONS		Oral anticoagulation recommended at CHA₂DS₂-VASC score ≥1 for men, ≥2 for women	
ELECTRONIC CALCULATOR		www.chadsvasc.org	

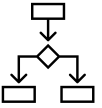
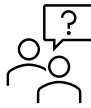
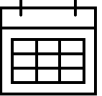



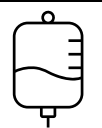







LVEF: left ventricular ejection fraction; MI: myocardial infarction; PAD: peripheral artery disease; TIA: transient ischaemic attack;

*any stroke includes intracranial haemorrhage

	HAS-BLED RISK SCORE (BLEEDING RISK)	DEFINITIONS	POINTS AWARDED
SCORE CALCULATION	Hypertension	Uncontrolled	+1
	Abnormal liver function	Cirrhosis, bilirubin > x2 upper normal limit, AST/ALP/ALT > x3 upper normal limit	+1
	Abnormal renal function	On dialysis or history of renal transplant or serum creatinine >200µmol/L	+1
	Stroke	Previous ischaemic or haemorrhagic stroke (including ICH)	+1
	Bleeding	History of major haemorrhage* or bleeding predisposition (e.g. anaemia)	+1
	Labile INRs	If taking a VKA, Time in Therapeutic Range (TTR) <60%	+1
	Age ≥65 years		+1
	Drug use	Antiplatelets, non-steroidal anti-inflammatory drugs	+1
	Alcohol excess	>8 units per week	+1
PATIENT'S TOTAL SCORE			
CONSIDERATIONS		HAS-BLED score ≥3 indicates high risk of bleeding. Address modifiable bleeding risk factors and follow-up more frequently.	
ELECTRONIC CALCULATOR		www.chadsvasc.org	

AST: aspartate aminotransferase; ALP: alkaline phosphatase; ALT: alanine aminotransferase; CHA₂DS₂-VASc: congestive heart failure, hypertension, age ≥75 years, diabetes mellitus, vascular disease, age 65-74 years, sex category; VKA: vitamin K antagonist (e.g. warfarin); ICH: intracranial haemorrhage; *include ICH

PATIENT-CENTRED CONSIDERATIONS (DISCUSS AS APPROPRIATE)

	Oral anticoagulant type (warfarin or NOAC or none)	<input type="checkbox"/>		Support with use of oral anticoagulant	<input type="checkbox"/>
	Regimen (once- or twice-daily or no preference)	<input type="checkbox"/>		Involvement of next-of-kin in discussion	<input type="checkbox"/>
	Monitoring preference (yes/no)	<input type="checkbox"/>		Cognitive function	<input type="checkbox"/>
	Antidote availability preference	<input type="checkbox"/>		Medication adherence	<input type="checkbox"/>
	Medication cost	<input type="checkbox"/>		Taken with or without food	<input type="checkbox"/>
	Dosette box	<input type="checkbox"/>		Sources of further information	<input type="checkbox"/>
	Side effects	<input type="checkbox"/>		Co-medication	<input type="checkbox"/>

Source: Adapted from the 2021 European Heart Rhythm Association Practical Guide on the use of non-vitamin K antagonist oral anticoagulants in patients with atrial fibrillation.

MANAGING THE RISK OF ORAL ANTICOAGULATION-RELATED BLEED: A PATIENT GUIDE

What are the risks of having a bleed on oral anticoagulation?

Oral anticoagulants work by preventing the formation of clots, which means that there is a lower risk of having a stroke. However, it also means that all types of oral anticoagulants can increase the risk of bleeding. This bleeding can range from the less worrisome (like a bruise) to more serious events (like bleeding in the brain or bleeding in the stomach).

Some of the newer oral anticoagulant medications, often called NOAC or DOAC, are less likely to cause bleeding in the brain than warfarin. It is good to discuss with your doctor what type of oral anticoagulant is best suited for you.

Overall, for most people with atrial fibrillation, the risk of having a stroke is higher than the risk of having a bleed while taking oral anticoagulation.

However, if you have already had a major bleed like a haemorrhagic stroke (bleeding in the brain), you may be more at risk of having other bleeds in the future. It is important for you to discuss your risk of both stroke and bleeding with your doctor when deciding if you would like to take oral anticoagulant medication.

What can I do to reduce the risk of having a bleed?



Take your medication every day



Keep your blood pressure within a normal range



Check for interactions between your oral anticoagulant and other medications

It is important to take the right dose of your oral anticoagulant because taking more than you need may put you at a higher risk of having a bleed. Make sure you take the medication as prescribed, which can be once or twice a day. Taking the medication at the same time every day is also important. Check with your doctor, pharmacist, or nurse how often you should take your oral anticoagulant.

If you are taking warfarin, the dose may change. To help you keep track, you will be given a booklet called the Yellow Book, where the correct daily dose will be written down. Keep this book safe and bring it with you to medical appointments.

Keeping your blood pressure under control can help you prevent unwanted bleeding. You can achieve this through a combination of lifestyle changes and medication. Patients with atrial fibrillation are advised to keep their blood pressure below 140/90mm Hg, but your target blood pressure might be different if you are diabetic or have other health conditions. Check with your doctor, pharmacist, or nurse for support and guidance on managing your blood pressure.


If you prescribed an oral anticoagulant, check with the doctor, nurse, or pharmacist if you can safely take it along with any other medications you may be taking. This is because not all medications go well together. In addition, if you are taking warfarin, you may also need to discuss your diet with your doctor as some foods (like leafy green vegetables or cranberries) interact with the medication. Drinking too much alcohol can also increase your risk of bleeding.

What to do in case of bleeding?

If you are experiencing minor bleeding, like a small cut, aim to control the bleeding by putting pressure on the wound. Once the bleeding stops, keep the wound clean and dry. Remember that bruising or minor bleeding (like bleeding from gums) is not uncommon for people taking oral anticoagulants.

If you are worried that you are experiencing more serious bleeding, attend your primary physician or GP practice, walk-in clinic, or emergency department. Make sure you tell the doctor or nurse treating you that you are taking an oral anticoagulant.

If you are concerned that you are experiencing major bleeding that cannot be controlled or if you have ANY of the following symptoms, call the emergency/ambulance number immediately:

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- **Severe bleeding that does not stop after 10-15 minutes of applying pressure**
 - **Vomiting blood**
 - **Bright red blood in your stools**
 - **Severe persisting abdominal pain**
 - **An abnormally fast or slow heart rate**
 - **A head injury**
 - **Seizures**
 - **Loss of consciousness**

SOURCES OF INFORMATION FOR PATIENTS IN THE UNITED KINGDOM AND EUROPE (IN ENGLISH)

Atrial Fibrillation Association for information on atrial fibrillation and oral anticoagulants

<https://arrhythmiaalliance.org.uk>

Helpline: 01789 867502

AFibMatters from the European Society of Cardiology for information in multiple languages

www.afibmatters.org

British Heart Foundation for information on stroke and atrial fibrillation

www.bhf.org.uk

Helpline: 0300 330 3311

Stroke Association for information on stroke and different stroke sub-types

www.stroke.org.uk

Helpline: 0303 3033 100

Stroke Alliance for Europe for stroke organisations outside of the UK

<https://www.safestroke.eu/>

StopAFib an American-based website with helpful video content; be aware that there may be differences in terminology and clinical practice

<https://www.stopafib.org/>

European Society of Cardiology for the latest guidelines on atrial fibrillation and other cardiological conditions; also provides links to cardiology societies in different European countries

<https://www.escardio.org/>

<https://www.escardio.org/The-ESC/Member-National-Cardiac-Societies>

PATIENT STORIES AND OTHER VIDEOS

Below are links to videos of patient stories. Your personal circumstances and your clinical history may be different from the people in these videos, but we hope that you may find them useful.

Health Talk A series of videos that describe individuals' experience of taking oral anticoagulants (both warfarin and NOAC) to prevent atrial fibrillation-related stroke

[Atrial fibrillation - Atrial fibrillation, stroke risk and blood thinning medication \(healthtalk.org\)](https://www.healthtalk.org/atrial-fibrillation-stroke-risk-and-blood-thinning-medication)

Heart Matters a comprehensive source information with videos and text about oral anticoagulants, produced by the British Heart Foundation

[Novel anticoagulants - how they work - side effects - BHF](#)

REFERENCES

Steffel J., Collins R., Antz M., Cornu P., Desteghe L., Georg K., Haeusler KG., Oldgren J., Reinecke H., Roldan-Schilling V., Rowell N., Sinnaeve P., Vanassche T., Potpara T., Camm AJ., Heidbuchel H. 2021 European Heart Rhythm Association Practical Guide on the Use of Non-Vitamin K Antagonist Oral Anticoagulants in Patients with Atrial Fibrillation. EP Europace 23(10): 1612-1676. Available: <https://doi.org/10.1093/europace/euab065>