Royal Cornwall Hospitals
NHS Trust

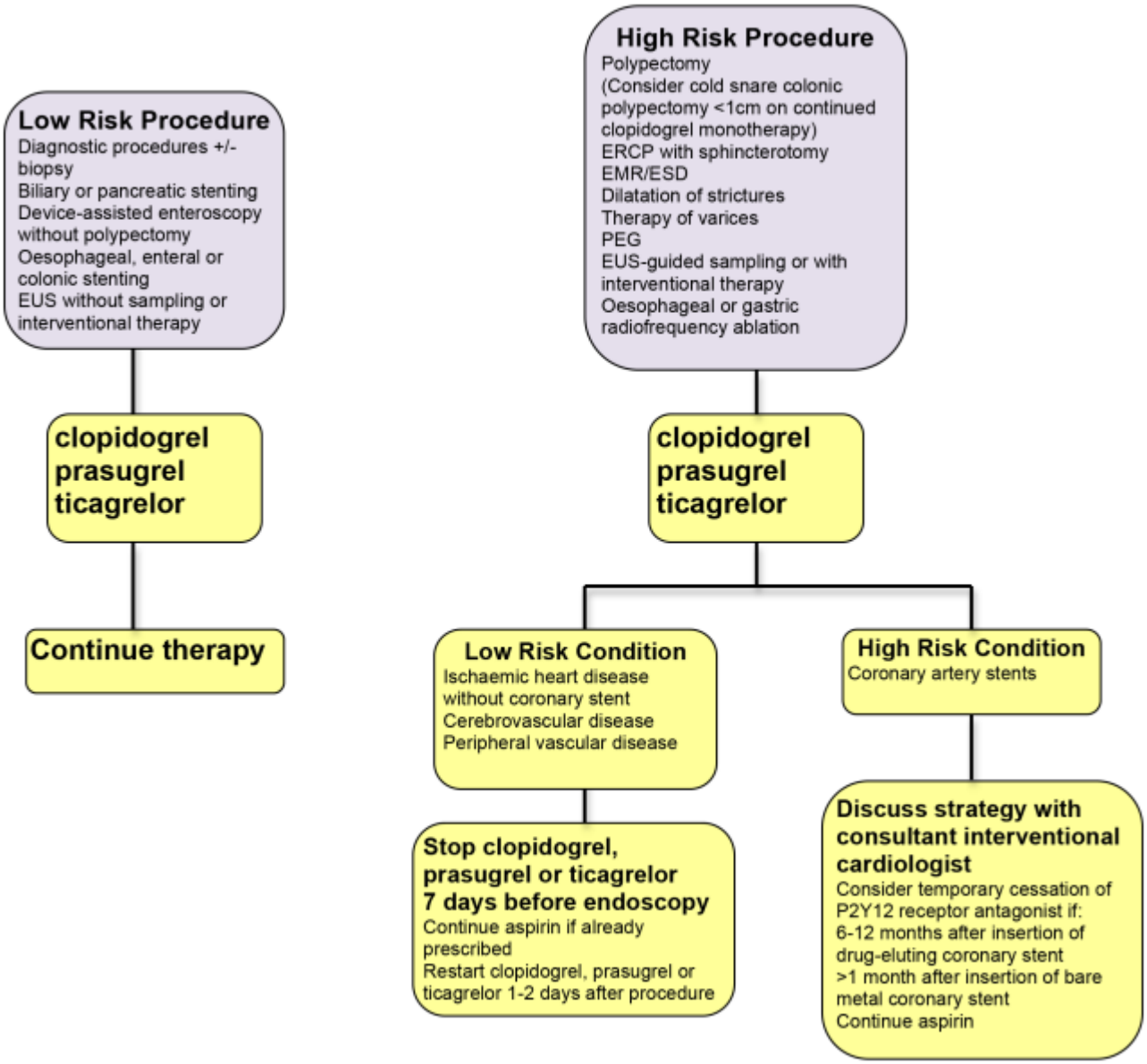
Management of Patients Taking Anticoagulants in Endoscopy

Clinical Guideline

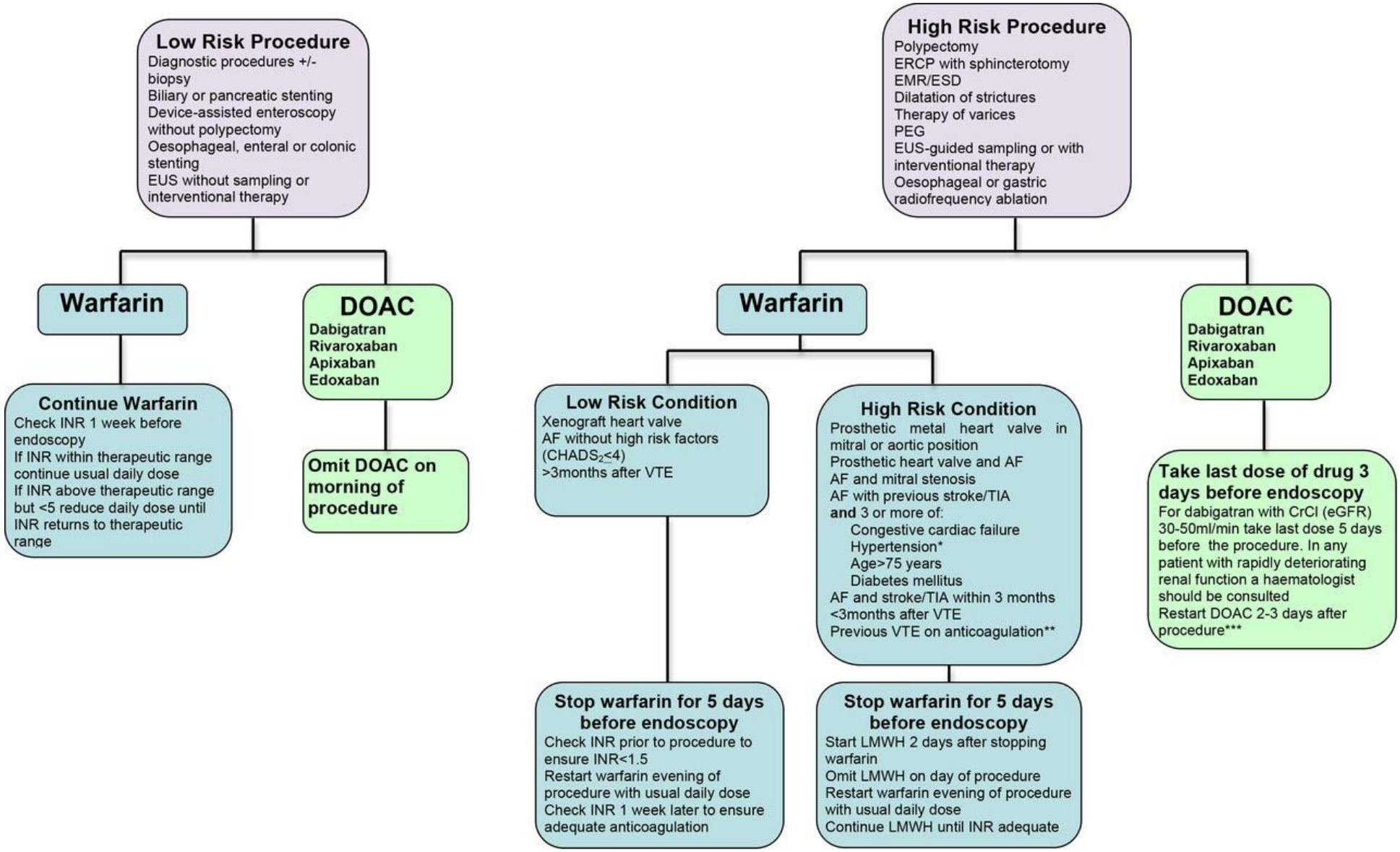
V4.1

September 2023

Summary



https://www.bsg.org.uk/wp-content/uploads/2021/08/BSG_ESGE-antiplatelet-and-anticoagulant-update-2021.pdf



https://www.bsg.org.uk/wp-content/uploads/2021/08/BSG_ESGE-antiplatelet-and-anticoagulant-update-2021.pdf

1. Aim/Purpose of this Guideline

1.1. The purpose of this guideline is to assist in the decision-making process of whether anticoagulants (and antiplatelet agents) should be stopped and when prior to endoscopy. It is designed to be used both by those referring patients for endoscopy and those undertaking endoscopic procedures.

1.2. This Guidance is based on Guidance from British Society of Gastroenterology (BSG). Full document can be found online https://www.bsg.org.uk/clinical-resource/updated-endoscopy-in-patients-on-antiplatelet-or-anticoagulant-therapy-including-direct-oral-anticoagulants/.

1.3. The responsibility lies with the refer to assess the patient according to the guidelines and make an appropriate plan for the patient, which should then be documented on the patient's maxims referral and communicated to the patient. The refer is also responsible for arranging any alternative medication that the patient takes.

1.4. **Abbreviations used in this guideline.**

- EMR: endoscopic mucosal resection.
- ESD: endoscopic submucosal dissection.
- ERCP: endoscopic retrograde cholangiopancreatography.
- EUS: endoscopic ultrasound.
- FNA: fine needle aspirate.
- GI: gastro-intestinal NOAC: novel oral anticoagulants.
- PEG: percutaneous endoscopic gastrostomy.
- INR: This is a blood test that measures Prothrombin time.
- LMWH: low molecular weight heparin.

1.5. This version supersedes any previous versions of this document.

Data Protection Act 2018 (General Data Protection Regulation – GDPR) Legislation

The Trust has a duty under the Data Protection Act 2018 and General Data Protection Regulations 2016/679 to ensure that there is a valid legal basis to process personal and sensitive data. The legal basis for processing must be identified and documented before the processing begins. In many cases we may need consent; this must be explicit, informed, and documented. We cannot rely on opt out, it must be opt in.

Data Protection Act 2018 and General Data Protection Regulations 2016/679 is applicable to all staff; this includes those working as contractors and providers of services.

For more information about your obligations under the Data Protection Act 2018 and General Data Protection Regulations 2016/679 please see the Information Use Framework Policy or contact the Information Governance Team

Royal Cornwall Hospital Trust rch-tr.infogov@nhs.net

2. The Guidance

2.1. One of the major risk factors of all endoscopic procedures is bleeding. This risk is dependent upon the nature of the planned procedure and whether the patient is taking any anti-platelet or anticoagulant medication. The risk of bleeding can be reduced by stopping the medication in a timely fashion, but this can increase the risk to the patient of thrombo-embolic disease. The degree of this risk is determined by the underlying disease for which the anticoagulant is prescribed. It is important that all these factors are considered when a patient is being referred for endoscopy and an appropriate decision made to ensure patient safety. This should be stated on the Maxims referral form to enable the endoscopy booking team to ensure patients are managed and booked for their procedure safely.

2.1.1. Determining the risk of an endoscopic procedure

Procedures which breach the mucosa are generally high-risk procedures, excepting standard diagnostic biopsies which do not increase the risk of clinically significant bleeding. Sometimes it is uncertain prior to a procedure whether it will be a low or high-risk procedure e.g., colonoscopy, when it is unknown whether a polyp requiring removal will be found. In these circumstances it is the decision of the referrer to weigh up the risk of stopping the anticoagulant versus the risk of a repeat procedure if a polyp is found and the anticoagulant has been continued.

LOW RISK FOR BLEEDING	HIGH RISK FOR BLEEDING
Diagnostic upper GI +/- biopsies	Therapeutic upper GI endoscopy • Dilation. • variceal therapy. • PEG insertion. • EMR.
Diagnostic lower GI +/- biopsies	Therapeutic lower GI endoscopy • Polypectomy • EMR • ESD
Biliary or pancreatic stenting (ERCP)	ERCP with sphincterotomy
Diagnostic EUS (Without sampling or interventional therapy)	EUS with FNA
Device-assisted enteroscopy without polypectomy	

2.1.2. Determining the risk of stopping anti-platelets/ anticoagulants

The risk of stopping antiplatelets/ anticoagulants will be determined by the underlying disease process for which they were prescribed. This will be highly individualized for each patient, but the following general principles apply:

LOW RISK FOR STOPPING: THROMBO-EMBOLIC DISEASE	HIGH RISK FOR STOPPING: THROMBO-EMBOLIC DISEASE
Ischaemic heart disease without coronary stents.	Bare metal coronary artery stents within 1 month of placement.
Cerebrovascular disease.	Drug eluting coronary artery stents within 12 months of placement.
Peripheral vascular disease.	

If the referrer is uncertain the risk of stopping the anti-platelet/ anticoagulant medication, this should be discussed with the Consultant who initiated the treatment or a senior member of their team.

2.1.3. Determining the risk of the individual antiplatelet/ anticoagulant drug.

Aspirin: antiplatelet agent, effects persist for 7-10 days post last ingestion. No evidence on increased risk of bleeding in endoscopy, even high-risk procedures.

CONTINUE IN ALL CASES

Clopidogrel, prasugrel and ticagrelor: antiplatelet agents.

- **Low risk Procedures.**
  - Continue therapy.
- **High risk Procedures.**
  - Stop 7 days before test.
  - If high risk patient (recent coronary stent) liaise with cardiologist.
  - Restart 1-2 day after the procedure Endoscopist responsibility to communicate this to the patient in the patient post procedure report.
- **Warfarin (phenindione):** vitamin K antagonist. Oral anticoagulant: effect measurable as prothrombin time.
- **Low Risk Procedures.**
  - Continue warfarin.

- Check INR 1 week before the endoscopy.
- If INR within therapeutic range continue usual daily dose.
- If INR above therapeutic range but <5 reduce daily dose until INR returns to therapeutic range.
- It is the refer responsibility to communicate this plan with the patient.

- **High Risk Procedures.**

  Low risk of thromboembolism (See Chart).

  - Stop warfarin 5 days before endoscopy.
  - Check INR prior to procedure to ensure INR<1.5.
  - Restart warfarin evening of the procedure with usual daily dose.
  - Check INR 1 week later to ensure adequate anticoagulation.
  - It is the refer responsibility to communicate this plan with the patient.

  High risk of thromboembolism (See Chart).

  - Stop warfarin for 5 days before endoscopy.
  - Start LMWH 2 days after stopping warfarin.
  - Omit LMWH on day of procedure.
  - Restart warfarin evening of procedure with usual daily dose.
  - Continue LMWH until INR adequate.
  - It is the refer responsibility to communicate this plan with the patient.

Risk stratification for discontinuation of warfarin therapy with respect to the requirement for heparin bridging.

High risk of thromboembolism	Low risk of thromboembolism
Prosthetic metal heart valve in mitral or aortic position.	Xenograft heart valve.
Prosthetic heart valve and atrial fibrillation.	
Atrial fibrillation and mitral stenosis.	

High risk of thromboembolism	Low risk of thromboembolism
Atrial fibrillation with previous stroke or transient ischaemic attack+3 or more of: Congestive cardiac failure. Hypertension, Blood pressure>140/90 mm Hg or on antihypertensive medication. Age>75 years. Diabetes mellitus.	Atrial fibrillation without high-risk factors.
Atrial fibrillation and previous stroke or transient ischaemic attack within 3 months.	
<3 months after venous thromboembolism. (The majority of patients are now on direct oral anticoagulants for venous thromboembolism and bridging is not appropriate. Consider deferring a high-risk procedure beyond3 months therapy in this high-risk group for thromboembolism.).	>3 months after venous thromboembolism.
Previous venous thromboembolism on warfarin, and target INR now 3.5.	

Novel oral anticoagulants (DOAC) - Rivaroxaban (Xarelto), Edoxaban (Lixiana) and Apixaban (Eliquis): direct inhibitors of activated factor X

Dabigatran (Pradaxa): direct thrombin inhibitor

ALL NOVEL ORAL ANTICOAGULANTS TO BE STOPPED FOR ALL PROCEDURES, AS SHOWN BELOW

- **Low Risk Procedure.**
  - Omit the morning of a low-risk procedure.
  - Restart next day.
  - It is the endoscopist responsibility to communicate this plan with the patient.
- **High Risk Procedure.**
  - Take last dose of drug 3 days before endoscopy.
  - For dabigatran with eGFR 30-50ml/min take last dose 5 days before the procedure

- In any patient with a rapidly deteriorating renal function a haematologist should be consulted.

- Restart DOAC 2-3 days after the procedure (Depends on haemorrhagic and thrombotic risk, consider extending interval for ESD.) This is the responsibility of the endoscopist to decide.

2.2. Emergency endoscopy:

On some occasions, especially when clinically significant gastrointestinal bleeding has occurred it will not be possible to stop antiplatelet/ anticoagulants in a timely fashion. Management of patients taking warfarin is available from the Document library.

Patients who have GI bleeding and are taking one of the NOAC should be treated in accordance with:

Thrombosis Prevention Investigation And Management of Anticoagulation Clinical Guideline.pdf

Where possible endoscopy should be deferred for at least 24 hours since the last dose. If this is not possible and all blood products have been given to reverse the effect of the agent, then endoscopy can proceed but the endoscopist should ensure that the patient is aware that the endoscopic procedure carries and increased risk of iatrogenic complications (bleeding) and document this.

3. Monitoring compliance and effectiveness

Information Category	Detail of process and methodology for monitoring compliance
Element to be monitored	1. All patients taking clopidogrel or oral anticoagulants will have a decision made regarding whether it should be discontinued or not documented. 2. All low-risk procedure patients will have clopidogrel/ warfarin continued for their procedure. 3. All high-risk patients will have clopidogrel/ warfarin stopped for their procedure. 4. All patients will have novel oral anticoagulants stopped for their procedure.
Lead	Governance lead for Gastroenterology and Hepatology

Information Category	Detail of process and methodology for monitoring compliance
Tool	1. The endoscopy booking team will audit endoscopy referral to determine whether a decision is documented when the patient is taking clopidogrel/ anticoagulants. If electronic endoscopy booking is initiated as planned, this element will not require monitoring as it will not be possible to request an endoscopy without the decision being documented. 2. All endoscopy staff will Datix any breach of elements 2-4 as above and all incidents raised through a datix will be discussed at the gastroenterology monthly governance meetings.
Frequency	Ongoing monitoring. Recorded in monthly governance meeting minutes. Recorded in monthly governance meeting minutes (and shared governance meeting with surgery every 6 months).
Reporting arrangements	See above. The lead or committee is expected to read and interrogate the report to identify deficiencies in the system and act upon them.
Acting on recommendations and Lead(s)	Endoscopy lead / Medical and surgical gastroenterology governance leads. Required actions will be identified and completed in a specified timeframe.
Change in practice and lessons to be shared	See above.

4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the 'Equality, Inclusion and Human Rights Policy' or the Equality and Diversity website.

4.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 1. Governance Information

Information Category	Detailed Information
Document Title:	Managements of Patients Taking Anticoagulants in Endoscopy Clinical Guideline V4.1.
This document replaces (exact title of previous version):	Managements of Patients Taking Anticoagulants in Endoscopy Clinical Guideline V4.0
Date Issued/Approved:	July 2022.
Date Valid From:	September 2023.
Date Valid To:	September 2025.
Directorate / Department responsible (author/owner):	Governance lead for Gastroenterology and Hepatology.
Contact details:	01872 253074.
Brief summary of contents:	Guidelines to aid decision making and management of anticoagulants and antiplatelet drugs in patients undergoing endoscopy.
Suggested Keywords:	Endoscopy, Gastroscopy, Colonoscopy, ERCP, Anticoagulants, Clopidogrel, Rivaroxaban, Apixaban, Dabigatran.
Target Audience:	RCHT: Yes CFT: No CIOS ICB: No
Executive Director responsible for Policy:	Chief Medical Officer.
Approval route for consultation and ratification:	Endoscopy user group. Care Group Governance Meeting.
General Manager confirming approval processes:	Roz Davies.
Name of Governance Lead confirming approval by specialty and care group management meetings:	Maria Lane.
Links to key external standards:	None required.
Related Documents:	https://www.bsg.org.uk/wp-content/uploads/2021/08/BSG_ESGE-antiplatelet-and-anticoagulant-update-2021.pdf

Information Category	Detailed Information
Training Need Identified?	No.
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet and Intranet.
Document Library Folder/Sub Folder:	Clinical / Gastroenterology.

Version Control Table

Date	Version Number	Summary of Changes	Changes Made by
4 October 2013	V1.0	Initial Issue.	Iain Murray, Consultant Gastroenterologist.
21 October 2013	V1.1	Change to the timing of stopping warfarin in keeping with national guidelines.	Iain Murray, Consultant Gastroenterologist.
21 November 2017	V2.0	Additional of flow charts at start of document. Review of guideline.	Nick Michell, Consultant Gastroenterologist.
12 October 2020	V3.0	Reviewed and no changes to content. Updated to latest Trust template.	Nick Michell, Consultant Gastroenterologist.
July 2022	V4.0	Reviewed and updated to reflect new BSG guidance. https://www.bsg.org.uk/wp-content/uploads/2021/08/BSG_ESGE-antiplatelet-and-anticoagulant-update-2021.pdf.	Katharine Todd Clinical endoscopist Governance lead for Gastroenterology and Hepatology.
16 May 2023	V4.1	Reviewed of document and updated as chart was incorrect.	Katharine Todd, Clinical Endoscopist Governance Lead for Gastroenterology and Hepatology

All or part of this document can be released under the Freedom of Information Act 2000.

All Policies, Strategies and Operating Procedures, including Business Plans, are to be kept for the lifetime of the organisation plus 6 years.

This document is only valid on the day of printing.

Controlled Document.

This document has been created following the Royal Cornwall Hospitals NHS Trust The Policy on Policies (Development and Management of Knowledge Procedural and Web Documents Policy). It should not be altered in any way without the express permission of the author or their Line Manager.

Appendix 2. Equality Impact Assessment

Section 1: Equality Impact Assessment (EIA) Form

The EIA process allows the Trust to identify where a policy or service may have a negative impact on an individual or particular group of people.

For guidance please refer to the Equality Impact Assessment Policy (available from the document library) or contact the Equality, Diversity and Inclusion Team rcht.inclusion@nhs.net

Information Category	Detailed Information
Name of the strategy / policy / proposal / service function to be assessed:	Management of Patients Taking Anticoagulants in Endoscopy Clinical Guideline V4.1.
Directorate and service area:	Gastroenterology / Specialist Services and Surgery.
Is this a new or existing Policy?	Existing.
Name of individual completing EIA (Should be completed by an individual with a good understanding of the Service/Policy):	Nick Michel, Consultant Gastroenterologist.
Contact details:	01872 253074.

Information Category	Detailed Information
1. Policy Aim - Who is the Policy aimed at? (The Policy is the Strategy, Policy, Proposal or Service Change to be assessed)	Safe management of antiplatelet and anticoagulant therapy in patients having endoscopic procedures.
2. Policy Objectives	To ensure that all patients undergoing endoscopic procedures have correct management of their antiplatelet/ anticoagulant therapy.
3. Policy Intended Outcomes	All patients being referred for endoscopy have an evidence-based plan for their anticoagulant therapy which his appropriate.
4. How will you measure each outcome?	Auditing numbers of referrals without such a management plan and also those where the plan is deemed inappropriate.
5. Who is intended to benefit from the policy?	All patients taking anticoagulant/ antiplatelet therapy who are undergoing endoscopy.

Information Category	Detailed Information
6a. Who did you consult with? (Please select Yes or No for each category)	• Workforce: Yes • Patients/ visitors: No • Local groups/ system partners: No • External organisations: No • Other: No
6b. Please list the individuals/groups who have been consulted about this policy.	**Please record specific names of individuals/ groups:** Endoscopy user group. Care Group Governance Meeting.
6c. What was the outcome of the consultation?	Agreed.
6d. Have you used any of the following to assist your assessment?	**National or local statistics, audits, activity reports, process maps, complaints, staff or patient surveys:** **No**

7. The Impact

Following consultation with key groups, has a negative impact been identified for any protected characteristic? Please note that a rationale is required for each one.

Where a negative impact is identified without rationale, the key groups will need to be consulted again.

Protected Characteristic	(Yes or No)	Rationale
Age	No	
Sex (male or female)	No	
Gender reassignment (Transgender, non-binary, gender fluid etc.)	No	
Race	No	
Disability (e.g. physical or cognitive impairment, mental health, long term conditions etc.)	No	
Religion or belief	No	
Marriage and civil partnership	No	

Protected Characteristic	(Yes or No)	Rationale
Pregnancy and maternity	No	
Sexual orientation (e.g., gay, straight, bisexual, lesbian etc.)	No	

A robust rationale must be in place for all protected characteristics. If a negative impact has been identified, please complete section 2. If no negative impact has been identified and if this is not a major service change, you can end the assessment here.

I am confident that section 2 of this EIA does not need completing as there are no highlighted risks of negative impact occurring because of this policy.

Name of person confirming result of initial impact assessment: Nick Michell, Consultant Gastroenterologist.

If a negative impact has been identified above OR this is a major service change, you will need to complete section 2 of the EIA form available here:
Section 2. Full Equality Analysis