



# PRIMIS

## making clinical data work

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## Warfarin Patient Safety quality improvement tool

The Warfarin Patient Safety quality improvement tool is free to all PRIMIS Hub members.

This quality improvement tool enables practices to audit their clinical data to look at the safety of warfarin prescribing. In particular, the tool will assist in examining whether patients are achieving the optimum benefit from taking warfarin by calculating the amount of time their International Normalised Ratio (INR) is within therapeutic range (TTR).

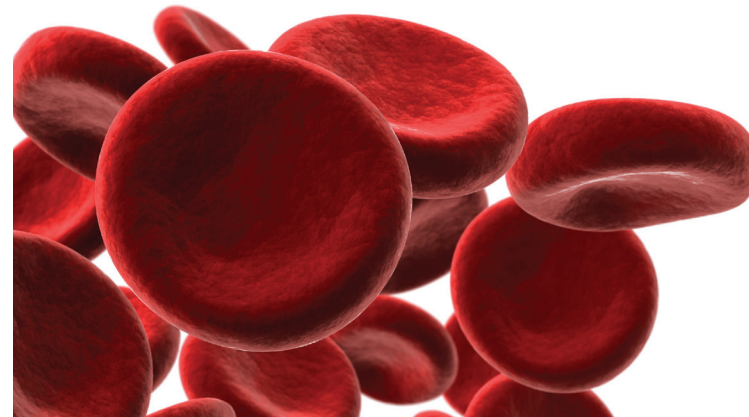
TTR is an effective way of establishing the quality of anticoagulation control and is an important predictor of bleeding and thrombosis. Because the tool also provides a bleeding risk score for each patient this allows clinicians to weigh a patient's risk of bleeding against the benefits of anticoagulation for stroke prevention in those patients on warfarin because of atrial fibrillation.

Warfarin Patient Safety also reports on several safety indicators that have been recommended by the British Committee for Standards in Haematology (BCSH) and National Patient Safety Agency (NPSA).

PRIMIS quality improvement tools are designed to signpost practices to patients who may be of interest and/or concern and not to replace clinical decision making.

## The quality improvement tool will:

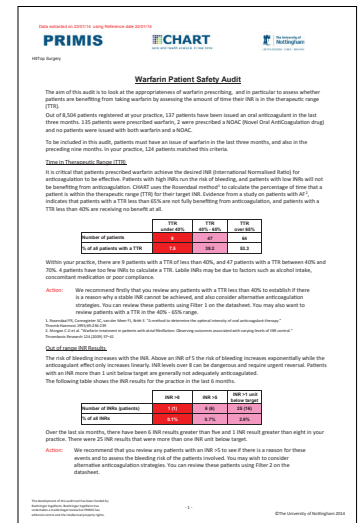
- ✓ enable practices to undertake a warfarin patient safety audit on all patients who are established on warfarin
- ✓ calculate time in therapeutic range (TTR) to help assess whether patients are benefitting from taking warfarin
- ✓ identify patients with out of range INRs of >5 and >8 in line with the BCSH safety indicators
- ✓ identify patients who may benefit from a medication review
- ✓ calculate bleeding risk for each patient using the HAS-BLED scoring system helping clinicians to make an informed assessment regarding anticoagulation therapy
- ✓ automatically generate a summary of suggested actions for the practice
- ✓ highlight patients without a coded reason for being on warfarin and/or without a coded annual warfarin assessment
- ✓ support GP clinical audit activity
- ✓ provide data in a format suitable for GP appraisal and revalidation



This is the first free quality improvement tool from PRIMIS to include an explanatory summary sheet, which provides the practice with a suggested call to action for each variable that is recorded.

Warfarin Patient Safety uses the CHART software tool and provides practices with a detailed, easy to follow narrative report of the audit results. Users of the tool will be able to print off the summary sheet, which gives a clear view of warfarin prescribing within the practice.

CHART presents data at both practice and patient levels. Users can quickly drill down to examine detailed patient care within a comprehensive datasheet.



An example summary sheet from the Warfarin Patient Safety quality improvement tool.

# Warfarin Patient Safety - CHART summary sheet

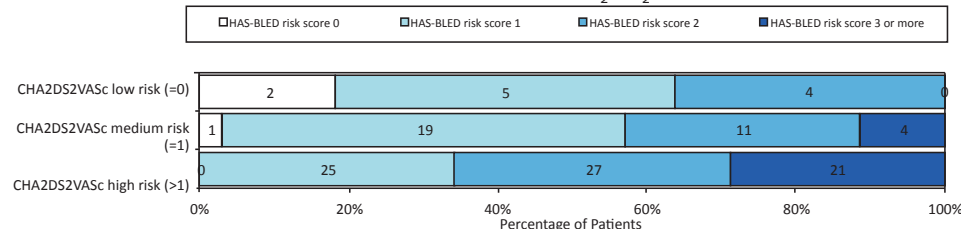
The Warfarin Patient Safety quality improvement tool benefits from the summary being presented as a narrative report. This has been designed to guide practices through their results in an easy to follow format. This facilitates reflection on clinical practice and supports GP appraisal and revalidation processes.

The summary sheet also includes a range of data tables and graphs offering an instant view of practice level clinical data.

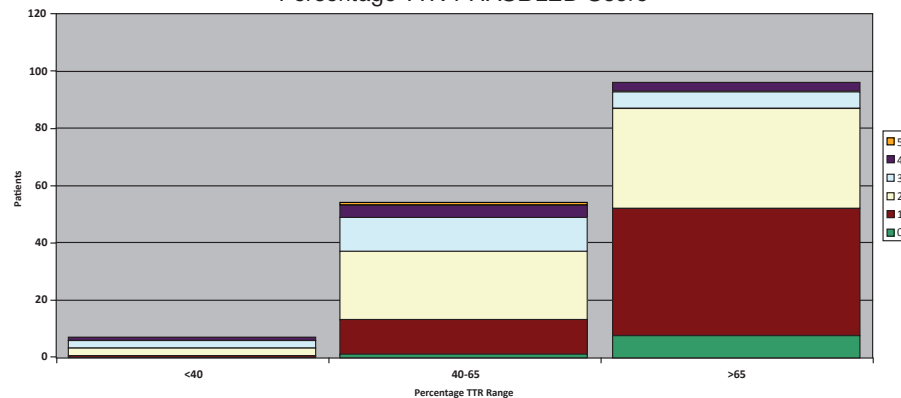
Percentage time in therapeutic range

	TTR under 40%	TTR 40% -65%	TTR over 65%
Number of patients	10	55	96
% of all patients with a TTR	6.2	34.2	59.6

HAS-BLED Risk score v CHA<sub>2</sub>DS<sub>2</sub>-VASc Risk score



Percentage TTR v HASBLED Score



A selection of pre-set graphs are included as part of the tool examining TTR and HAS-BLED scores

## Five key actions following use of the Warfarin Patient Safety tool

### Identify patients with a TTR less than 40% (pre-set filter 1)

Review these patients to consider why their TTR is <40% and re-assess strategies for ongoing anticoagulation as appropriate. Patients whose INR frequently exceeds the desired range are at an increased risk of bleeding, while those with INRs frequently below therapeutic range are at increased risk of thrombosis

### Identify patients with an INR greater than 5 (pre-set filter 2)

Investigate whether there is a cause for out of range results and assess the bleeding risk of the patients involved. Focus initially on patients with an INR>8. You may wish to consider alternative anticoagulation strategies

### Review patients with a HAS-BLED score of 3 or more (pre-set filter 3)

For patients taking warfarin for the purpose of stroke prevention in atrial fibrillation, assess the risk of bleeding. A HAS-BLED score of 3 or more is generally considered high risk, the HAS-BLED score identifies potentially modifiable risk factors (except age)

### Consider whether anticoagulation is justified for patients at low risk of stroke (pre-set filter 4)

Using pre-set filter 4 within the datasheet, identify patients with a CHA<sub>2</sub>DS<sub>2</sub>-VASc score of 0

### Review patients with no identified reason for taking warfarin (pre-set filter 5)

Patients who do not have one of the listed indications in their record may be on warfarin for other reasons. Only the most significant have been included for the purposes of this audit. Add any reasons for warfarin use where this is absent from the patient's records, ensuring that coding is accurate

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Warfarin Patient Safety

Use of the Warfarin Patient Safety quality improvement tool is FREE to practices registered with the PRIMIS Hub online membership service. Basic membership is FREE of charge and includes access to several other tools, including the GRASP suite of tools and both the CHART and CHART Online software tools. Sign up for basic PRIMIS Hub membership at:

[nottingham.ac.uk/primis/joinus](http://nottingham.ac.uk/primis/joinus)

PRIMIS' development of the Warfarin Patient Safety quality improvement tool has been funded by Boehringer Ingelheim. Boehringer Ingelheim has undertaken a medico legal review but PRIMIS has retained editorial control and intellectual property rights for this tool.

