NICE National Institute for Health and Care Excellence

NICE quality standard

Venous thromboembolism in adults: diagnosis and management

Quality standard

Published: 28 March 2013
www.nice.org.uk/guidance/qs29

Contents

Introduction and overview 5

Introduction 5

Overview 6

List of quality statements 7

Quality statement 1: Interim therapeutic dose of anticoagulation therapy for suspected deep vein thrombosis 8

Quality statement 8

Rationale 8

Quality measures 8

What the quality statement means for different audiences 9

Source guidance 9

Definitions 10

Quality statement 2: Diagnosis of deep vein thrombosis 11

Quality statement 11

Rationale 11

Quality measures 11

What the quality statement means for different audiences 12

Source guidance 12

Definitions 12

Quality statement 3: Interim therapeutic dose of anticoagulation therapy for suspected pulmonary embolism 14

Quality statement 14

Rationale 14

Quality measures 14

What the quality statement means for different audiences 16

Source guidance 16

Definitions 16

Quality statement 4: Mechanical interventions 18
Quality statement 5: Investigations for cancer 19
Quality statement 19
Rationale 19
Quality measures 19
What the quality statement means for different audiences 20
Source guidance 20
Definitions 20
Quality statement 6: Thrombophilia testing 22
Quality statement 22
Rationale 22
Quality measures 22
What the quality statement means for different audiences 22
Source guidance 23
Definition 23
Quality statement 7: Treatment of people with active cancer 24
Quality statement 24
Rationale 24
Quality measures 24
What the quality statement means for different audiences 25
Source guidance 25
Definitions 25
Quality statement 8: Follow-up for people without cancer 27
Quality statement 27
Rationale 27
Quality measures 27
What the quality statement means for different audiences 28
Source guidance 28

Definitions ... 28

Quality statement 9: Follow-up for people with cancer ... 30

Quality statement ... 30

Rationale ... 30

Quality measures ... 30

What the quality statement means for different audiences ... 31

Source guidance ... 31

Definitions ... 31

Using the quality standard ... 33

Diversity, equality and language ... 33

Development sources ... 34

Evidence sources ... 34

Policy context ... 34

Related NICE quality standards ... 35

The Topic Expert Group and NICE project team ... 36

Topic Expert Group ... 36

NICE project team ... 37

Update information ... 38

About this quality standard ... 39

This standard is based on NG158.

This standard should be read in conjunction with QS3 and QS15.

Introduction and overview

Introduction

Venous thromboembolism (VTE) is a condition in which a blood clot (a thrombus) forms in a vein, most commonly in the deep veins of the legs or pelvis. This is known as deep vein thrombosis, or DVT. The thrombus can dislodge and travel in the blood, particularly to the pulmonary arteries. This is known as pulmonary embolism, or PE. The term VTE includes both DVT and PE.

VTE is an important cause of death and its prevention and management is a priority for the NHS. It has been estimated that 25,000 people in the UK die every year from preventable hospital-acquired VTE (Department of Health and Chief Medical Officer. Report of the independent expert working group on the prevention of venous thromboembolism in hospitalised patients, 2007). Non-fatal VTE is also important because it can cause serious longer-term conditions such as post-thrombotic syndrome and chronic thromboembolic pulmonary hypertension.

The diagnosis of VTE is not always straightforward because other conditions have similar symptoms. Failure to diagnose a case of VTE may result in a patient not receiving the correct treatment and potentially developing post-thrombotic syndrome or a fatal PE as a result.

This quality standard covers the diagnosis and treatment of venous thromboembolic diseases in adults, excluding pregnant women. For more information see the scope for this quality standard. For prevention of VTE see the NICE quality standard for venous thromboembolism in adults: reducing the risk in hospital.

NICE quality standards describe high-priority areas for quality improvement in a defined care or service area. Each standard consists of a prioritised set of specific, concise and measurable statements. They draw on existing guidance, which provides an underpinning, comprehensive set of recommendations, and are designed to support the measurement of improvement. The quality standard, in conjunction with the guidance on which it is based, should contribute to the improvements outlined in the NHS Outcomes Framework 2013 to 2014 (Department of Health,

November 2012).

Overview

The quality standard for diagnosis and management of venous thromboembolism in adults states that services should be commissioned from and coordinated across all relevant agencies encompassing the management of venous thromboembolism care pathway. A person-centred approach to provision of services is fundamental to delivering high quality care to adults with venous thromboembolism.

The Health and Social Care Act 2012 sets out a clear expectation that the care system should consider NICE quality standards in planning and delivering services, as part of a general duty to secure continuous improvement in quality. Commissioners and providers of health and social care should cross refer across the library of NICE quality standards when designing high-quality services.

Patients, service users and carers may use the quality standard to find out about the quality of care they should expect to receive; support asking questions about the care they receive; and to make a choice between providers of social care services.

The quality standard should be read in the context of national and local guidelines on training and competencies. All health and social care professionals involved in assessing, caring for and treating adults with venous thromboembolism (including those who assess remotely using algorithms written by medical professionals) should be sufficiently and appropriately trained and competent to deliver the actions and interventions described in the quality standard.

List of quality statements

Statement 1 People with suspected deep vein thrombosis are offered an interim therapeutic dose of anticoagulation therapy if diagnostic investigations are expected to take longer than 4 hours from the time of first clinical suspicion.

Statement 2 People with suspected deep vein thrombosis have all diagnostic investigations completed within 24 hours of first clinical suspicion.

Statement 3 People with suspected pulmonary embolism are offered an interim therapeutic dose of anticoagulation therapy if diagnostic investigations are expected to be delayed.

Statement 4 This statement has been removed. For more details see update information.

Statement 5 People with unprovoked deep vein thrombosis or pulmonary embolism who are not already known to have cancer are offered timely investigations for cancer.

Statement 6 People with provoked deep vein thrombosis or pulmonary embolism are not offered testing for thrombophilia.

Statement 7 People with active cancer and confirmed proximal deep vein thrombosis or pulmonary embolism are offered anticoagulation therapy.

Statement 8 People without cancer who receive anticoagulation therapy have a review within 3 months of diagnosis of confirmed proximal deep vein thrombosis or pulmonary embolism to discuss the risks and benefits of continuing anticoagulation therapy.

Statement 9 People with active cancer who receive anticoagulation therapy have a review within 6 months of confirmed proximal deep vein thrombosis or pulmonary embolism to discuss the risks and benefits of continuing anticoagulation therapy.

Other quality standards that should also be considered when choosing, commissioning or providing a high-quality venous thromboembolic diseases service are listed in related NICE quality standards.

Quality statement 1: Interim therapeutic dose of anticoagulation therapy for suspected deep vein thrombosis

Quality statement

People with suspected deep vein thrombosis are offered an interim therapeutic dose of anticoagulation therapy if diagnostic investigations are expected to take longer than 4 hours from the time of first clinical suspicion.

Rationale

It is important that people with suspected deep vein thrombosis (DVT) are treated promptly. In line with NICE guidance, people with suspected DVT should be offered interim anticoagulation therapy if diagnostic investigations are expected to take longer than 4 hours from the time of first clinical suspicion. This is to avoid adverse effects if a quick confirmation test is not available or possible because there is risk of pulmonary embolism (PE).

Quality measures

Structure

Evidence of local arrangements to ensure people with suspected DVT are offered an interim therapeutic dose of anticoagulation therapy if diagnostic investigations are expected to take longer than 4 hours from the time of first clinical suspicion.

Data source: Local data collection.

Process

The proportion of people with suspected DVT whose diagnostic investigations take longer than 4 hours from the time of first clinical suspicion who receive an interim therapeutic dose of anticoagulation therapy.

Numerator – the number of people in the denominator who receive an interim therapeutic dose of

anticoagulation therapy.

Denominator – the number of people with suspected DVT whose diagnostic investigations were not completed within 4 hours from the time of first clinical suspicion.

Data source: Local data collection.

Outcome

Incidence of PE in people who have undergone diagnostic tests for DVT.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers ensure systems are in place for people with suspected DVT to be offered an interim dose of anticoagulation therapy if diagnostic investigations are expected to take longer than 4 hours from the time of first clinical suspicion.

Healthcare professionals ensure they offer people with suspected DVT an interim dose of anticoagulation therapy if diagnostic investigations are expected to take longer than 4 hours from the time of first clinical suspicion.

Commissioners ensure they commission services that offer people with suspected DVT an interim dose of anticoagulation therapy if diagnostic investigations are expected to take longer than 4 hours from the time of first clinical suspicion.

People who may have deep vein thrombosis and whose confirmation test is expected to take longer than 4 hours from the time an appropriate healthcare professional requests it are offered a dose of an anticoagulant (a drug that helps to stop blood clots forming or enlarging, and makes it less likely that a blood clot will come loose and travel to the lungs).

Source guidance

Venous thromboembolic diseases: diagnosis, management and thrombophilia testing. NICE guideline NG158 (2020), recommendations 1.1.1 to 1.1.4, 1.1.8 and 1.1.10

Definitions

Suspected DVT

The clinical features of suspected DVT and how to estimate the clinical probability of DVT using the 2-level DVT Wells score (calculated from a series of questions about symptoms and medical history) are described in NICE's guideline on venous thromboembolic diseases, table 1 and visual summary. [NICE's guideline on venous thromboembolic diseases, recommendations 1.1.1 and 1.1.2, table 1 and the visual summary for venous thromboembolism: diagnosis and anticoagulation treatment]

Diagnostic investigations

Diagnostic investigations include proximal leg vein ultrasound scans and quantitative D-dimer tests. These investigations and their timing are outlined in NICE's guideline on venous thromboembolic diseases, visual summary. [NICE's guideline on venous thromboembolic diseases, recommendations 1.1.3 and 1.1.4, and the visual summary for venous thromboembolism: diagnosis and anticoagulation treatment]

First clinical suspicion

Clinical suspicion of DVT by an appropriate healthcare professional in community or hospital settings. [Expert opinion]

Quality statement 2: Diagnosis of deep vein thrombosis

Quality statement

People with suspected deep vein thrombosis have all diagnostic investigations completed within 24 hours of first clinical suspicion.

Rationale

It is important that all diagnostic investigations for suspected deep vein thrombosis (DVT) are completed within 24 hours to ensure prompt treatment if the diagnosis is confirmed, and to avoid unnecessary repeat doses of anticoagulants if the diagnosis is excluded.

Quality measures

Structure

Evidence of local arrangements to ensure people with suspected DVT have all diagnostic investigations completed within 24 hours of first clinical suspicion.

Data source: Local data collection.

Process

The proportion of people who have all diagnostic investigations completed within 24 hours of first clinical suspicion.

Numerator – the number of people in the denominator who have all diagnostic investigations completed within 24 hours of first clinical suspicion.

Denominator – the number of people with suspected DVT.

Data source: Local data collection.

Outcome

Incidence of pulmonary embolism (PE) in people who have undergone all diagnostic tests for DVT.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers ensure systems are in place for people with suspected DVT to have all diagnostic investigations completed within 24 hours of first clinical suspicion.

Healthcare professionals ensure people with suspected DVT have all diagnostic investigations completed within 24 hours of first clinical suspicion.

Commissioners ensure they commission services for people with suspected DVT to have all diagnostic investigations completed within 24 hours of first clinical suspicion.

People who may have deep vein thrombosis have all their diagnostic tests done within 24 hours of the tests being requested by an appropriate healthcare professional.

Source guidance

Venous thromboembolic diseases: diagnosis, management and thrombophilia testing. NICE guideline NG158 (2020), recommendations 1.1.1 to 1.1.4, 1.1.8, 1.1.10 and 1.1.22

Definitions

Suspected DVT

The clinical features of suspected DVT and how to estimate the clinical probability of DVT using the 2-level DVT Wells score (calculated from a series of questions about symptoms and medical history) are described in NICE's guideline on venous thromboembolic diseases, table 1 and visual summary. [NICE's guideline on venous thromboembolic diseases, recommendations 1.1.1 and 1.1.2, table 1 and the visual summary for venous thromboembolism: diagnosis and anticoagulation treatment]

Diagnostic investigations

Diagnostic investigations include proximal leg vein ultrasound scans and quantitative D-dimer tests. These investigations and their timing are outlined in NICE's guideline on venous thromboembolic diseases, visual summary. [NICE's guideline on venous thromboembolic diseases, recommendations 1.1.3 and 1.1.4, and the visual summary for venous thromboembolism: diagnosis and anticoagulation treatment]

First clinical suspicion

Clinical suspicion of DVT by an appropriate healthcare professional in community or hospital settings. [Expert opinion]

Quality statement 3: Interim therapeutic dose of anticoagulation therapy for suspected pulmonary embolism

Quality statement

People with suspected pulmonary embolism are offered an interim therapeutic dose of anticoagulation therapy if diagnostic investigations are expected to be delayed.

Rationale

The consequences of missing a diagnosis of pulmonary embolism (PE) are severe and if a PE is left untreated there is a high risk of mortality. For people with a 'likely' PE Wells score (more than 4 points), interim anticoagulation therapy should be offered if diagnostic investigations cannot be done immediately. For people with an 'unlikely' PE Wells score (4 or less), interim anticoagulation therapy should be offered if the D-dimer test results cannot be obtained within 4 hours.

Quality measures

Structure

a) Evidence of local arrangements to ensure people with suspected PE and a Wells score of more than 4 points are offered an interim therapeutic dose of anticoagulation therapy if diagnostic investigations cannot be done immediately.

Data source: Local data collection.

b) Evidence of local arrangements to ensure people with suspected PE and a Wells score of 4 points or less are offered an interim therapeutic dose of anticoagulation therapy if the D-dimer test result cannot be obtained within 4 hours of first clinical suspicion.

Data source: Local data collection.

Process

a) The proportion of people with suspected PE and a Wells score of more than 4 points whose diagnostic investigations cannot be done immediately who receive an interim therapeutic dose of anticoagulation therapy.

Numerator – the number of people in the denominator who receive an interim therapeutic dose of anticoagulation therapy.

Denominator – the number of people with suspected PE and a Wells score of more than 4 points whose diagnostic investigations cannot be done immediately.

For measurement purposes 'immediately' can be defined as within 1 hour from the first clinical suspicion.

Data source: Local data collection.

b) The proportion of people with suspected PE and a Wells score of 4 points or less whose D-dimer test results cannot be obtained within 4 hours from the time of first clinical suspicion who receive an interim therapeutic dose of anticoagulation therapy.

Numerator – the number of people in the denominator who receive an interim therapeutic dose of anticoagulation therapy.

Denominator – the number of people with suspected PE and a Wells score of 4 points or less whose D-dimer test results cannot be obtained within 4 hours from the time of first clinical suspicion.

Data source: Local data collection.

Outcome

Mortality from PE.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers ensure that systems are in place for people with a 'likely' PE Wells score (more than 4 points) to be offered interim anticoagulation therapy if diagnostic investigations cannot be done immediately. They also ensure that for people with an 'unlikely' PE Wells score (4 or less), interim anticoagulation therapy is offered if the D-dimer test results cannot be obtained within 4 hours.

Healthcare professionals ensure that people with a 'likely' PE Wells score (more than 4 points) are offered interim anticoagulation therapy if diagnostic investigations cannot be done immediately. They also ensure that people with an 'unlikely' PE Wells score (4 or less) are offered interim anticoagulation therapy if the D-dimer test results cannot be obtained within 4 hours.

Commissioners ensure that they commission services in which people with a 'likely' PE Wells score (more than 4 points) are offered interim anticoagulation therapy if diagnostic investigations cannot be done immediately. They also ensure that they commission services in which people with an 'unlikely' PE Wells score (4 or less) are offered interim anticoagulation therapy if the D-dimer test results cannot be obtained within 4 hours.

People who may have a pulmonary embolism whose diagnostic tests are delayed are offered a dose of an anticoagulant (a drug that helps to stop blood clots forming or enlarging, and makes it less likely that a blood clot will come loose and travel to the lungs).

Source guidance

Venous thromboembolic diseases: diagnosis, management and thrombophilia testing. NICE guideline NG158 (2020), recommendations 1.1.15, 1.1.17, 1.1.18 and 1.1.21

Definitions

Suspected PE

The clinical features of suspected PE and how to estimate the clinical probability of PE using the 2-level PE Wells score (calculated from a series of questions about symptoms and medical history) are described in NICE's guideline on venous thromboembolic diseases, table 2 and visual summary. [NICE's guideline on venous thromboembolic diseases, recommendations 1.1.15 and 1.1.17, table 2 and the visual summary for venous thromboembolism: diagnosis and anticoagulation treatment]

Diagnostic investigations

Diagnostic investigations include quantitative D-dimer tests, a computed tomography pulmonary angiogram (CPTA), ventilation/perfusion single photon emission computed tomography (V/Q SPECT) scan or, if a V/Q SPECT scan is not available, a V/Q planar scan, as an alternative to CTPA with interim therapeutic anticoagulation offered if a scan cannot be done immediately. These investigations and their timing are outlined in NICE's guideline on venous thromboembolic diseases, visual summary. [NICE's guideline on venous thromboembolic diseases, recommendations 1.1.18 and 1.1.21, and the visual summary for venous thromboembolism: diagnosis and anticoagulation treatment]

Delayed diagnostic investigations

For people with suspected PE and a Wells score of more than 4 points, diagnostic investigations should be done immediately and no later than within 1 hour from the time of first clinical suspicion.

For people with suspected PE and a Wells score of 4 points or less the D-dimer test results should be obtained within 4 hours from the time of first clinical suspicion. [Adapted from NICE's guideline on venous thromboembolic diseases, recommendations 1.1.18, 1.1.21 and expert opinion]

First clinical suspicion

Clinical suspicion of PE by an appropriate healthcare professional in community or hospital settings. [Expert opinion]

Quality statement 4: Mechanical interventions

This statement has been removed. For more details see update information.

Quality statement 5: Investigations for cancer

Quality statement

People with unprovoked deep vein thrombosis or pulmonary embolism who are not already known to have cancer are offered timely investigations for cancer.

Rationale

A significant proportion of people with a new unprovoked deep vein thrombosis (DVT) or pulmonary embolism (PE) may have an undiagnosed cancer. In addition, the occurrence of cancer-related venous thromboembolic disease (VTE) is associated with a poorer prognosis. Therefore it is critical for the optimal management of unprovoked DVT or PE (in a person in whom no obvious risk factors for DVT or PE have been identified) to establish whether they may have an underlying cancer.

Quality measures

Structure

Evidence of local arrangements to ensure people with unprovoked DVT or PE who are not already known to have cancer are offered investigations for cancer.

Data source: Local data collection.

Process

The proportion of people with unprovoked DVT or PE who are not already known to have cancer who receive investigations for cancer.

Numerator – the number of people in the denominator who receive investigations for cancer.

Denominator – the number of people with unprovoked DVT or PE who are not already known to have cancer.

Data source: Local data collection.

Outcome

Incidence of cancer detected after unprovoked DVT or PE.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers ensure systems are in place for people with unprovoked DVT or PE who are not already known to have cancer to be offered investigations for cancer.

Healthcare professionals ensure people with unprovoked DVT or PE who are not already known to have cancer are offered investigations for cancer.

Commissioners ensure they commission services that offer people with unprovoked DVT or PE who are not already known to have cancer investigations for cancer.

People who have an unprovoked (with no obvious cause) deep vein thrombosis or pulmonary embolism and who are not already known to have cancer are offered tests for cancer.

Source guidance

Venous thromboembolic diseases: diagnosis, management and thrombophilia testing. NICE guideline NG158 (2020), recommendation 1.8.1

Definitions

Unprovoked DVT or PE

DVT or PE in a person with no recent (within 3 months) major clinical risk factor for VTE – such as surgery, trauma, significant immobility (bedbound, unable to walk unaided or likely to spend a substantial proportion of the day in bed or in a chair), pregnancy or puerperium – and who is not having hormonal therapy (combined oral contraceptive pill or hormone replacement therapy). [NICE's guideline on venous thromboembolic diseases, terms used in this guideline section]

Investigations for cancer

Investigations in people with unprovoked DVT or PE who are not already known to have cancer to determine whether the VTE could be related to a previously undetected cancer. The specific investigations are:

- medical history review
- baseline blood tests, including full blood count, renal and hepatic function, PT and APTT (prothrombin time and activated partial thromboplastin time)
- physical examination.

[NICE's guideline on venous thromboembolic diseases, recommendation 1.8.1]

Timely investigations for cancer

The 2-week wait standard for cancers guarantees that everyone referred urgently with suspected cancer will be able to be seen by a specialist or in a diagnostic clinic within 2 weeks from the date of decision to refer. Therefore the investigations for cancer should be carried out within 2 weeks of being ordered. [NHS England's Guide to NHS waiting times in England]

Quality statement 6: Thrombophilia testing

Quality statement

People with provoked deep vein thrombosis or pulmonary embolism are not offered testing for thrombophilia.

Rationale

Thrombophilia testing does not provide benefit and is unnecessary for people with provoked deep vein thrombosis (DVT) or pulmonary embolism (PE).

Quality measures

Structure

Evidence of local arrangements to ensure people with provoked DVT or PE do not have testing for thrombophilia.

Data source: Local data collection.

Process

The proportion of people with provoked DVT or PE who are tested for thrombophilia.

Numerator – the number of people in the denominator who receive testing for thrombophilia.

Denominator – the number of people with provoked DVT or PE.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers ensure systems are in place to ensure that people with provoked DVT or PE are not tested for thrombophilia.

Healthcare professionals ensure people with provoked DVT or PE are not tested for thrombophilia.

Commissioners ensure they commission services that do not carry out testing for thrombophilia in people with provoked DVT or PE.

People who have had a provoked (with an obvious cause) deep vein thrombosis or pulmonary embolism are not offered tests for thrombophilia (a condition that makes the blood more likely to form clots).

Source guidance

Venous thromboembolic diseases: diagnosis, management and thrombophilia testing. NICE guideline NG158 (2020), recommendation 1.9.2

Definition

Provoked DVT or PE

DVT or PE in a person with a recent (within 3 months) and transient major clinical risk factor for VTE – such as surgery, trauma, significant immobility (bedbound, unable to walk unaided or likely to spend a substantial proportion of the day in bed or in a chair), pregnancy or puerperium – or in a person who is having hormonal therapy (combined oral contraceptive pill or hormone replacement therapy). [NICE's guideline on venous thromboembolic diseases, terms used in this guideline section]

Quality statement 7: Treatment of people with active cancer

Quality statement

People with active cancer and confirmed proximal deep vein thrombosis or pulmonary embolism are offered anticoagulation therapy.

Rationale

In people with cancer, anticoagulation can lead to improved prognosis including a reduction in the risk of recurrent deep vein thrombosis (DVT) or pulmonary embolism (PE).

Note that treating DVT or PE in people with active cancer is an off-label use for most anticoagulants. See Prescribing medicines for more information.

Quality measures

Structure

Evidence of local arrangements to ensure people with active cancer and confirmed proximal DVT or PE are offered anticoagulation therapy.

Data source: Local data collection.

Process

The proportion of people with active cancer and confirmed proximal DVT or PE who receive anticoagulation therapy.

Numerator – the number of people in the denominator who receive anticoagulation therapy.

Denominator – the number of people with active cancer and confirmed proximal DVT or PE.

Data source: Local data collection.

Outcome

Incidence of recurrent DVT or PE in patients with cancer and VTE who have completed anticoagulation therapy.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers ensure systems are in place for people with active cancer and confirmed proximal DVT or PE to be offered anticoagulation therapy.

Healthcare professionals ensure people with active cancer and confirmed proximal DVT or PE are offered anticoagulation therapy.

Commissioners ensure they commission services that offer people with active cancer and confirmed proximal DVT or PE anticoagulation therapy.

People with active cancer who have a deep vein thrombosis or pulmonary embolism are offered treatment with an anticoagulant (a drug that helps stop blood clots forming or enlarging and makes it less likely that a blood clot will come loose and travel to the lungs).

Source guidance

Venous thromboembolic diseases: diagnosis, management and thrombophilia testing. NICE guideline NG158 (2020), recommendations 1.3.15, 1.3.17 and 1.3.18

Definitions

Active cancer

Receiving active antimitotic treatment; or diagnosed within the past 6 months; or recurrent or metastatic; or inoperable. Excludes squamous skin cancer and basal cell carcinoma. [NICE's guideline on venous thromboembolic diseases, terms used in this guideline section]

Proximal DVT

Deep vein thrombosis at or above the level of the popliteal trifurcation area. [NICE's guideline on venous thromboembolic diseases, terms used in this guideline section]

Anticoagulation therapy

For people with active cancer and confirmed proximal DVT or PE, consider a direct-acting oral anticoagulant. If this is unsuitable consider a low molecular weight heparin (LMWH) alone or LMWH concurrently with a vitamin K antagonist (VKA) for at least 5 days, or until the INR is at least 2.0 in 2 consecutive readings, followed by a VKA on its own.

Note that treating DVT or PE in people with active cancer is an off-label use for most anticoagulants. See Prescribing medicines for more information. [NICE's guideline on venous thromboembolic diseases, recommendations 1.3.17 and 1.3.18]

Quality statement 8: Follow-up for people without cancer

Quality statement

People without cancer who receive anticoagulation therapy have a review within 3 months of diagnosis of confirmed proximal deep vein thrombosis or pulmonary embolism to discuss the risks and benefits of continuing anticoagulation therapy.

Rationale

As anticoagulation therapy carries potential risks such as bleeding there is a need to ensure the therapy remains beneficial. For people who have had a confirmed proximal deep vein thrombosis (DVT) or pulmonary embolism (PE) and who do not have cancer, a review should take place.

Quality measures

Structure

Evidence of local arrangements to ensure people without cancer who have had a confirmed proximal DVT or PE and receive anticoagulation receive a review within 3 months of diagnosis to discuss the risks and benefits of continuing anticoagulation therapy.

Data source: Local data collection.

Process

The proportion of people without cancer who have had a confirmed proximal DVT or PE and receive anticoagulation therapy who have a review within 3 months of diagnosis to discuss the risks and benefits of continuing anticoagulation therapy.

Numerator – the number of people in the denominator who receive a review within 3 months of diagnosis to discuss the risks and benefits of continuing anticoagulation therapy.

Denominator – the number of people who have received anticoagulation therapy following a confirmed diagnosis of proximal DVT or PE at least 3 months previously and who do not have

cancer.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers ensure systems are in place for people without cancer who have had a confirmed proximal DVT or PE and receive anticoagulation therapy to be offered a review within 3 months of diagnosis to discuss the risks and benefits of continuing anticoagulation therapy beyond 3 months.

Healthcare professionals ensure people without cancer who have had a confirmed proximal DVT or PE and receive anticoagulation therapy are offered a review within 3 months of diagnosis to discuss the risks and benefits of continuing anticoagulation therapy.

Commissioners ensure they commission services that offer people without cancer who have had a confirmed proximal DVT or PE and receive anticoagulation therapy a review within 3 months of diagnosis to discuss the risks and benefits of continuing anticoagulation therapy.

People without cancer who have had deep vein thrombosis or pulmonary embolism and who are having treatment with an anticoagulant (a drug that helps stop blood clots forming or enlarging and makes it less likely that a blood clot will come loose and travel to the lungs) are offered a review within 3 months of diagnosis to discuss the risks and benefits of continuing treatment with an anticoagulant.

Source guidance

Venous thromboembolic diseases: diagnosis, management and thrombophilia testing. NICE guideline NG158 (2020), recommendation 1.4.1

Definitions

Timing of review

Healthcare professionals need to consider the summary of product characteristics to determine the timing of the review and duration of treatment required for the anticoagulant received. [Expert opinion]

Proximal DVT

Deep vein thrombosis at or above the level of the popliteal trifurcation area. [NICE's guideline on venous thromboembolic diseases, terms used in this guideline section]

Quality statement 9: Follow-up for people with cancer

Quality statement

People with active cancer who receive anticoagulation therapy have a review within 6 months of confirmed proximal deep vein thrombosis or pulmonary embolism to discuss the risks and benefits of continuing anticoagulation therapy.

Rationale

As anticoagulation therapy carries potential risks such as bleeding there is a need to ensure the therapy remains beneficial. For people who have had a confirmed diagnosis of proximal deep vein thrombosis (DVT) or pulmonary embolism (PE) and who have cancer, a review should take place.

Note that treating DVT or PE in people with active cancer is an off-label use for most anticoagulants. See Prescribing medicines for more information.

Quality measures

Structure

Evidence of local arrangements to ensure people with cancer who have had a confirmed proximal DVT or PE and who receive anticoagulation are reviewed within 6 months of diagnosis to discuss the risks and benefits of continuing anticoagulation therapy.

Data source: Local data collection.

Process

The proportion of people with cancer who have had a confirmed proximal DVT or PE and receive anticoagulation therapy who have a review within 6 months of diagnosis to discuss the risks and benefits of continuing anticoagulation therapy.

Numerator – the number of people in the denominator who receive a review within 6 months of diagnosis to discuss the risks and benefits of continuing anticoagulation therapy.

Denominator – the number of people who have received anticoagulation therapy following a confirmed diagnosis of proximal DVT or PE at least 6 months previously and who have a diagnosis of cancer.

Data source: Local data collection.

What the quality statement means for different audiences

Service providers ensure systems are in place for people with cancer and who have had a confirmed proximal DVT or PE to be offered a review to discuss the risks and benefits of continuing anticoagulation therapy.

Healthcare professionals ensure people with cancer who have had a confirmed proximal DVT or PE are offered a review to discuss the risks and benefits of continuing anticoagulation therapy.

Commissioners ensure they commission services that offer people with cancer who have had a confirmed proximal DVT or PE a review to discuss the risks and benefits of continuing anticoagulation therapy.

People with cancer who have had deep vein thrombosis or pulmonary embolism and who are having treatment with an anticoagulant (a drug that that helps stop blood clots forming or enlarging and makes it less likely that a blood clot will come loose and travel to the lungs) are offered a review to discuss the risks and benefits of continuing treatment with an anticoagulant.

Source guidance

Venous thromboembolic diseases: diagnosis, management and thrombophilia testing. NICE guideline NG158 (2020), recommendations 1.3.15 and 1.4.1

Definitions

Timing of review

Healthcare professionals need to consider the summary of product characteristics to determine the timing of the review and duration of treatment required for the anticoagulant received. [Expert opinion]

Proximal DVT

Deep vein thrombosis at or above the level of the popliteal trifurcation area. [NICE's guideline on venous thromboembolic diseases, terms used in this guideline section]

Using the quality standard

Other national guidance and current policy documents have been referenced during the development of this quality standard. It is important that the quality standard is considered by commissioners, providers, health and social care professionals, patients, service users and carers alongside the documents listed in development sources.

The quality measures accompanying the quality statements aim to improve structures, processes and outcomes of care in areas identified as requiring quality improvement. They are not a new set of targets or mandatory indicators for performance management.

Expected levels of achievement for quality measures are not specified. Quality standards are intended to drive up the quality of care, so achievement levels of 100% should be aspired to (or 0% if the quality statement states that something should not be done). However, NICE recognises that this may not always be appropriate in practice when taking account of safety, choice and professional judgement and so desired levels of achievement should be defined locally.

See NICE's how to use quality standards for further information, including advice on using quality measures.

Diversity, equality and language

During the development of this quality standard, equality issues have been considered and equality assessments for this quality standard are available.

Good communication between healthcare professionals and people with venous thromboembolic diseases is essential. Treatment and care, and the information given about it, should be culturally appropriate. It should also be accessible to people with additional needs such as physical, sensory or learning disabilities, and to people who do not speak or read English. People with venous thromboembolic diseases should have access to an interpreter or advocate if needed.

Commissioners and providers should aim to achieve the quality standard in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this quality standard should be interpreted in a way that would be inconsistent with compliance with those duties.

Development sources

Evidence sources

The documents below contain recommendations from NICE guidance or other NICE-accredited sources that were used by the Topic Expert Group to develop the quality standard statements and measures.

Venous thromboembolic diseases: diagnosis, management and thrombophilia testing. NICE guideline NG158 (2020)

Policy context

It is important that the quality standard is considered alongside current policy documents, including:

- Venous thromboembolism (VTE) risk assessment. Department of Health (2010)
- Venous thromboembolism prevention: a patient safety priority. Department of Health (2009)
- Using the commissioning for quality and innovation (CQUIN) payment framework. Department of Health (2008) (see 'Guidance on national goals for 2011–12')
- Report of the independent expert working group on the prevention of venous thromboembolism (VTE) in hospitalised patients. Department of Health (2007)

Related NICE quality standards

- Patient experience in adult NHS services. NICE quality standard 15 (2012, updated 2019)
- Venous thromboembolism in adults: reducing the risk in hospital. NICE quality standard 3 (2010, updated 2018)

The Topic Expert Group and NICE project team

Topic Expert Group

Professor Gerard Stansby
Professor of vascular surgery

Mr Scott Harrison
Lead pharmacist, anticoagulation

Professor Beverley Hunt
Professor of thrombosis and haemostasis consultant

Mr Roshan Agarwal
Senior lecturer/honorary consultant medical oncologist

Mr David Berridge
Divisional medical manager oncology and consultant vascular surgeon

Ms Hayley Flavell
Anticoagulant and thrombosis consultant nurse

Dr Nigel Langford
Acute medical physician

Dr Steven Moser
Consultant radiologist

Dr Karen Sheares
Respiratory consultant with an interest in pulmonary vascular diseases

Dr Richard Day
Consultant geriatrician

Mr Christian Clark
Patient member

Ms Susan Ballard
Patient member

Professor David Fitzmaurice
General practitioner

Dr Lee-Yee Chong
NCGC representative

NICE project team

Dylan Jones
Associate director

Tim Stokes
Consultant clinical adviser

Rachel Neary
Programme manager

Gavin Flatt
Lead technical analyst

Esther Clifford
Project manager

Jenny Harrisson
Coordinator

Update information

January 2021: Changes were made to quality statement 3 so that it is more closely aligned to the source guideline, with the timescale for offering interim therapeutic coagulation for suspected pulmonary embolism dependent on the person's clinical probability of pulmonary embolism.

April 2016: Statement 4 on mechanical interventions (graduated compression stockings) for people with proximal deep vein thrombosis has been removed. This change has been made because the source guidance for this statement (NICE's guideline on venous thromboembolic diseases: diagnosis, management and thrombophilia testing) was updated in November 2015 and the advice on using compression stockings has changed.

Minor changes since publication

March 2020: Changes have been made to align this quality standard with the NICE guideline on venous thromboembolic diseases: diagnosis, management and thrombophilia testing. The source guidance references, data sources and definitions sections have been updated throughout.

About this quality standard

NICE quality standards are a set of specific, concise statements and associated measures. They set out aspirational, but achievable, markers of high-quality, cost-effective patient care, covering the treatment and prevention of different diseases and conditions. Derived from the best available evidence such as NICE guidance and other evidence sources accredited by NHS Evidence, they are developed independently by NICE, in collaboration with NHS and social care professionals, their partners and service users, and address 3 dimensions of quality: clinical effectiveness, patient safety and patient experience.

The methods and processes for developing NICE quality standards are described in the quality standards process guide.

This quality standard has been incorporated into the NICE Pathway on venous thromboembolism.

NICE has produced a quality standard service improvement template to help providers make an initial assessment of their service compared with a selection of quality statements. This tool is updated monthly to include new quality standards.

NICE guidance and quality standards apply in England and Wales. Decisions on how they apply in Scotland and Northern Ireland are made by the Scottish government and Northern Ireland Executive. NICE quality standards may include references to organisations or people responsible for commissioning or providing care that may be relevant only to England.

ISBN: 978-1-4731-0093-0

Supporting organisations

Many organisations share NICE's commitment to quality improvement using evidence-based guidance. The following supporting organisations have recognised the benefit of the quality standard in improving care for patients, carers, service users and members of the public. They have agreed to work with NICE to ensure that those commissioning or providing services are made aware of and encouraged to use the quality standard.

- British Thoracic Society
- Lifeblood: The Thrombosis Charity

- Royal College of Nursing (RCN)
- Royal Pharmaceutical Society
- Royal College of General Practitioners (RCGP)