

# Varicose veins in the legs

Quality standard

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[www.nice.org.uk/guidance/qs67](http://www.nice.org.uk/guidance/qs67)

# Contents

Quality statements .....	3
Quality statement 1: Referral to a vascular service.....	4
Quality statement.....	4
Rationale .....	4
Quality measures.....	4
What the quality statement means for different audiences.....	5
Source guidance.....	5
Definitions of terms used in this quality statement .....	6
Quality statement 2: Duplex ultrasound .....	7
Quality statement.....	7
Rationale .....	7
Quality measures.....	7
What the quality statement means for different audiences.....	8
Source guidance.....	8
Definitions of terms used in this quality statement .....	8
Quality statement 3: Treatment of varicose veins .....	10
Quality statement.....	10
Rationale .....	10
Quality measures.....	10
What the quality statement means for different audiences.....	12
Source guidance.....	12
Definitions of terms used in this quality statement .....	13
Update information .....	15
About this quality standard .....	16
Diversity, equality and language.....	16

This standard is based on CG168.

This standard should be read in conjunction with QS15 and QS22.

## Quality statements

Statement 1 People with varicose veins that are causing symptoms or complications (including ulceration) are referred to a vascular service.

Statement 2 People with varicose veins who are seen by a vascular service are assessed with duplex ultrasound.

Statement 3 People with confirmed varicose veins and truncal reflux are offered a suitable treatment in this order: endothermal ablation, ultrasound-guided foam sclerotherapy, surgery, compression hosiery.

# Quality statement 1: Referral to a vascular service

## Quality statement

People with varicose veins that are causing symptoms or complications (including ulceration) are referred to a vascular service.

## Rationale

If left untreated, varicose veins will continue to cause symptoms that affect quality of life, and may progress to bleeding, skin damage and ulceration. Referral to a vascular service is a first step to interventional treatment for varicose veins that can relieve symptoms, and slow disease progression and improve people's quality of life.

## Quality measures

The following measures can be used to assess the quality of care or service provision specified in the statement. They are examples of how the statement can be measured, and can be adapted and used flexibly.

## Structure

Evidence of local arrangements and written referral criteria to ensure that people with varicose veins that are causing symptoms or complications (including ulceration) are referred to a vascular service.

**Data source:** Local data collection.

## Process

Proportion of people with varicose veins that are causing symptoms or complications (including ulceration) who are referred to a vascular service.

Numerator – the number in the denominator who are referred to a vascular service.

Denominator – the number of people who present with varicose veins that are causing symptoms or complications (including ulceration).

**Data source:** Local data collection.

## Outcome

Progression of venous leg disease.

**Data source:** Local data collection.

## What the quality statement means for different audiences

**Service providers** (such as GPs and vascular services) ensure that local referral pathways into vascular services are consistent with the evidence-based referral criteria in [NICE's guideline on varicose veins](#), which include varicose veins that are causing symptoms or complications (including ulceration).

**Healthcare professionals** (such as GPs) follow local referral pathways into vascular services to ensure that people with varicose veins that are causing symptoms or complications (including ulceration) are referred to a vascular service.

**Commissioners** monitor activity across local referral pathways to ensure that the evidence-based referral criteria in [NICE's guideline on varicose veins](#) are being followed.

**People with varicose veins that are causing symptoms (for example pain, aching, discomfort, swelling, heaviness and itching) or problems such as bleeding, eczema or leg ulcers** are referred to a specialist vascular service (a team of healthcare professionals who have training and experience in diagnosing and treating varicose veins).

## Source guidance

[Varicose veins: diagnosis and management. NICE guideline CG168 \(2013\)](#), recommendation 1.2.2 (key priority for implementation)

## Definitions of terms used in this quality statement

### Symptoms of varicose veins

Symptoms of varicose veins include troublesome lower limb symptoms (typically pain, aching, discomfort, swelling, heaviness and itching). The symptoms may be associated with primary or recurrent varicose veins. [Adapted from [NICE's guideline on varicose veins](#), recommendation 1.2.2]

### Complications of varicose veins

Complications of varicose veins are:

- lower-limb skin changes, such as pigmentation or eczema, thought to be caused by chronic venous insufficiency
- bleeding varicose veins
- superficial vein thrombosis (characterised by the appearance of hard, painful veins) and suspected venous incompetence
- a venous leg ulcer (a break in the skin below the knee that has not healed within 2 weeks) or a healed venous leg ulcer.

[Adapted from [NICE's guideline on varicose veins](#), recommendation 1.2.2]

### Vascular service

A vascular service is a team of healthcare professionals who have the skills to undertake a full clinical and duplex ultrasound assessment and provide a full range of treatment.

[[NICE's guideline on varicose veins](#), recommendation 1.2.1]

# Quality statement 2: Duplex ultrasound

## Quality statement

People with varicose veins who are seen by a vascular service are assessed with duplex ultrasound.

## Rationale

Duplex ultrasound is a non-invasive scan used to image the blood vessels of the body. It provides detailed information that helps to confirm the diagnosis and pattern of venous disease and determine the most appropriate treatment option. The handheld doppler is still used in some services, but it is outdated and does not provide the detailed, accurate information produced by duplex ultrasound.

## Quality measures

The following measures can be used to assess the quality of care or service provision specified in the statement. They are examples of how the statement can be measured, and can be adapted and used flexibly.

## Structure

Evidence of local arrangements to ensure that people with varicose veins seen by a vascular service are assessed with duplex ultrasound.

**Data source:** Local data collection.

## Process

Proportion of people with varicose veins seen by a vascular service who are assessed with duplex ultrasound.

Numerator – the number in the denominator who are assessed with duplex ultrasound.

Denominator – the number of people with varicose veins seen by a vascular service.

**Data source:** Local data collection.

## What the quality statement means for different audiences

**Service providers** (secondary care) ensure that vascular services have adequate numbers of duplex ultrasound machines and that staff have undergone appropriate training, so that all people with varicose veins referred to a vascular service are assessed with duplex ultrasound.

**Healthcare professionals** working in a vascular service ensure that people with varicose veins are assessed with duplex ultrasound.

**Commissioners** ensure that they commission vascular services that have sufficient capacity, equipment and skilled staff to assess varicose veins using duplex ultrasound.

**People with varicose veins who have been referred to a vascular service** have a duplex ultrasound scan (a scan that uses high-frequency sound waves to produce a picture of the veins). The scan shows the blood flow and helps the vascular service team locate any damaged valves that might be causing the varicose veins.

## Source guidance

Varicose veins: diagnosis and management. NICE guideline CG168 (2013), recommendation 1.3.1 (key priority for implementation)

## Definitions of terms used in this quality statement

### Vascular service

A vascular service is a team of healthcare professionals who have the skills to undertake a full clinical and duplex ultrasound assessment and provide a full range of treatment.

[NICE's guideline on varicose veins, recommendation 1.2.1]

## Duplex ultrasound

A device utilising doppler ultrasound that permits colour-coded visualisation of blood flow in the superficial, perforating and deep veins, as well as grey-scale imaging of the veins and surrounding tissue. It can also be used to image blood flow in arteries. [[NICE's full guideline on varicose veins, glossary](#)]

# Quality statement 3: Treatment of varicose veins

## Quality statement

People with confirmed varicose veins and truncal reflux are offered a suitable treatment in this order: endothermal ablation, ultrasound-guided foam sclerotherapy, surgery, compression hosiery.

## Rationale

Historically surgery and compression therapy were the only treatments available to people with varicose veins, but in recent years other treatments including endothermal ablation and ultrasound-guided foam sclerotherapy have been developed. These newer therapies are less invasive than surgery, promote faster recovery and need shorter hospital stays. Not all treatments are suitable for all people and therefore it is important that the person's needs and preferences are also considered when deciding which is the most suitable treatment.

## Quality measures

The following measures can be used to assess the quality of care or service provision specified in the statement. They are examples of how the statement can be measured, and can be adapted and used flexibly.

## Structure

Evidence of local arrangements that the full range of treatments for varicose veins is commissioned in accordance with [NICE's guideline on varicose veins](#).

**Data source:** Local data collection.

## Process

a) Proportion of people with confirmed varicose veins and truncal reflux suitable for endothermal ablation who are offered endothermal ablation.

Numerator – the number in the denominator offered endothermal ablation.

Denominator – the number of people with confirmed varicose veins and truncal reflux suitable for endothermal ablation.

**Data source:** Local data collection.

b) Proportion of people with confirmed varicose veins and truncal reflux unsuitable for endothermal ablation who are offered ultrasound-guided foam sclerotherapy.

Numerator – the number in the denominator offered ultrasound-guided foam sclerotherapy.

Denominator – the number of people with confirmed varicose veins and truncal reflux unsuitable for endothermal ablation, but suitable for ultrasound-guided foam sclerotherapy.

**Data source:** Local data collection.

c) Proportion of people with confirmed varicose veins and truncal reflux unsuitable for endothermal ablation and ultrasound-guided foam sclerotherapy who are offered surgery.

Numerator – the number in the denominator offered surgery.

Denominator – the number of people with confirmed varicose veins and truncal reflux unsuitable for endothermal ablation and ultrasound-guided foam sclerotherapy, but suitable for surgery.

**Data source:** Local data collection.

d) Proportion of people with confirmed varicose veins and truncal reflux unsuitable for endothermal ablation, ultrasound-guided foam sclerotherapy and surgery who are offered compression hosiery.

Numerator – the number in the denominator offered compression hosiery.

Denominator – the number of people with confirmed varicose veins and truncal reflux unsuitable for endothermal ablation, ultrasound-guided foam sclerotherapy and surgery.

**Data source:** Local data collection.

## What the quality statement means for different audiences

**Service providers** (secondary care) ensure that the local treatment pathway is consistent with the evidence-based treatment order in [NICE's guideline on varicose veins](#).

**Healthcare professionals** ensure that they follow the local treatment pathway to offer people a treatment that is consistent with the evidence-based treatment order in [NICE's guideline on varicose veins](#).

**Commissioners** ensure that the full range of treatments for varicose veins is commissioned in accordance with [NICE's guideline on varicose veins](#).

**People with varicose veins caused by problems with the blood flow in the leg** are offered treatment with:

- endothermal ablation (in which the veins are closed off using heat)
- or, if endothermal ablation is unsuitable, a treatment called ultrasound-guided foam sclerotherapy (in which the veins are closed off using a chemical foam)
- or, if both endothermal ablation and ultrasound-guided foam sclerotherapy are unsuitable, surgery to remove the varicose veins.

They should only be offered compression hosiery (stockings designed to improve blood flow by squeezing the legs) as a permanent treatment if none of the other treatments are suitable for them.

## Source guidance

[Varicose veins: diagnosis and management. NICE guideline CG168 \(2013\)](#),

recommendations 1.3.2 and 1.3.4 (key priority for implementation)

## Definitions of terms used in this quality statement

### Suitable treatment order

Endothermal ablation, ultrasound-guided foam sclerotherapy or surgery may be offered in that order, according to suitability. It recommends compression hosiery only if those 3 interventions are unsuitable for the person. The suitability of each option will depend on the person's clinical circumstances and their preferences. [Adapted from [NICE's guideline on varicose veins](#)]

### Truncal reflux

Truncal reflux is the failure of competence of valves in 1 or more of the 3 truncal veins – the great saphenous vein, the small saphenous vein and the anterior accessory saphenous vein. [Adapted from [NICE's full guideline on varicose veins](#), page 122 and glossary definition of reflux]

### Endothermal ablation

There are 2 types of endothermal ablation in common use: radiofrequency ablation and laser ablation (see [NICE's interventional procedures guidance on radiofrequency ablation of varicose veins](#) and [endovenous laser treatment of the long saphenous vein](#)).

Radiofrequency ablation uses radio wave electromagnetic energy to cause venous ablation and closure by raising the temperature of the inner lumen of the vein. Laser ablation uses laser energy to cause venous ablation and closure by raising the temperature of the inner lumen of the vein. [Adapted from [NICE's full guideline on varicose veins](#), glossary definitions of radiofrequency ablation and laser ablation]

### Ultrasound-guided foam sclerotherapy

The injection of a sclerosing agent into a vein for chemical ablation guided by real-time ultrasound imaging (see [NICE's interventional procedure guidance on ultrasound-guided foam sclerotherapy for varicose veins](#)). [[NICE's full guideline on varicose veins](#), glossary definition of ultrasound guided foam sclerotherapy]

## **Surgery**

A surgical technique of truncal or tributary vein removal, in which the vein is physically stripped from surrounding tissues and removed. [[NICE's full guideline on varicose veins](#), glossary definition of stripping]

## **Compression hosiery**

Graduated elastic stockings work by compressing the varicose veins, so emptying them of blood and by increasing the venous return, both of which reduce venous pressure. They can be bought 'off the shelf' in different sizes or they can be made to measure and are available in different pressures. [Adapted from [NICE's full guideline on varicose veins](#), glossary definition of compression hosiery]

## **Reflux**

Reflux is the backflow of blood through a venous valve. [[NICE's full guideline on varicose veins](#), glossary definition of stripping]

# Update information

## Minor changes since publication

**April 2015:** Minor maintenance.

## About this quality standard

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. NICE quality standards draw on existing NICE or NICE-accredited guidance that provides an underpinning, comprehensive set of recommendations, and are designed to support the measurement of improvement.

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

Information about [how NICE quality standards are developed](#) is available from the NICE website.

See our [webpage on quality standards advisory committees](#) for details about our standing committees. Information about the topic experts invited to join the standing members is available from the [webpage for this quality standard](#).

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.

## Diversity, equality and language

Equality issues were considered during development and [equality assessments for this quality standard](#) are available. Good communication between healthcare professionals and

people with varicose veins is essential. Treatment, care and support, 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 varicose veins 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 have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity and foster good relations. Nothing in this quality standard should be interpreted in a way that would be inconsistent with compliance with those duties.

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## Endorsing organisation

This quality standard has been endorsed by NHS England, as required by the Health and Social Care Act (2012)

## 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.

- [Royal College of Obstetricians and Gynaecologists](#)
- [Royal College of Surgeons of England](#)
- [Society of Vascular Nurses](#)
- [Vascular Society](#)