

GUIDELINES FOR PRACTICE

OPTIMISING VENOUS LEG ULCER SERVICES IN A CHANGING NHS A UK consensus

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Foreword

Today's NHS is driven by the Quality, Innovation, Productivity and Prevention (QIPP) agenda, and by efficiency and cost-saving (DH, 2010). The high prevalence and costs of venous leg ulcers mean it is likely leg ulcer prevention and management will soon be tied to Commissioning for Quality and Innovation (CQUIN) payments (DH, 2008; DH, 2012a), which financially reward high-quality performance linked to healing rates.

These drivers for change have encouraged a systematic approach to leg ulcer management with accurate reporting of healing rates or recurrence rates to show year-on-year improvements. The challenge will be to meet these requirements, using the resources and skills available to deliver high-quality leg ulcer services.

A group of nine experts from around the UK met in April 2013 and developed a consensus on what constitutes an ideal venous leg ulcer service. This document offers a framework to guide clinicians who have identified the need to develop a new service or to improve an existing service. It focuses on the provision of high-quality, efficient care that involves the whole healthcare system and treats the patient's leg ulcer in the context of other conditions, with recognition that the main priorities are healing and preventing recurrence, as the benefits of prevention — both financially and from a patient perspective — are clear.

Venous disease is a progressive condition that commonly manifests as skin changes, the most serious of which is venous ulceration, requiring the integration of management of the underlying venous disease and effective compression therapy. In line with a number of national recommendations (NICE, 2013; Venous Forum of the Royal Society of Medicine, 2010), any patient with a venous leg ulcer (VLU) should now be seen by a vascular service to be assessed with duplex ultrasound and offered treatment of his/her underlying venous disease by an appropriate specialist.

Further, service strategies will differ depending on the nation; certain terms might be referred to by one name, with the understanding similar structures exist in or can be adapted to the different systems of England, Wales, Scotland and Northern Ireland.

The goal is to support best practice in VLU services to optimise service delivery, which will ultimately improve patient care.

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Introduction

INTEGRATED CARE 1: A well-connected hub

The VLU service will need to work in partnership with other services within the catchment area to create a seamless service. This type of partnership is seen as a critical factor in achieving optimum healing rates, reducing recurrence of healed ulcers and enhancing the patient experience. VLU services can be delivered under the NHS, via the Any Qualified Provider scheme in England, or through independent social enterprises or similar, depending on the nation in which the service exists.

A venous leg ulcer (VLU) service acts as a hub of specialist venous knowledge and provides gold-standard care for the prevention and management of lower-limb ulceration (see Integrated Care 1, the first in a series of boxes that explains how VLU services can work alongside a socially based model of care, rather than in clinical isolation).

Although often nurse-led (Dowsett, 1997; Campbell et al, 2005) and staffed by nurses who have received appropriate leg ulcer management training and education, the VLU service takes a multidisciplinary team (MDT) approach to provide:

- Rapid assessment to establish a correct diagnosis from which all treatments will follow
- A triage for referral to other specialities as appropriate, in particular the vascular and dermatology departments, and tissue viability nurses in the community and local hospitals
- Appropriate treatment in line with local, national and international guidelines
- Care pathways across acute and primary care services
- Well-leg clinics to advise, monitor and support patients with healed VLUs
- A leg ulcer management training programme (including staff development of competencies)
- Advice and support for patients, relatives and carers
- Advice for healthcare professionals.

AIMS OF A VLU SERVICE

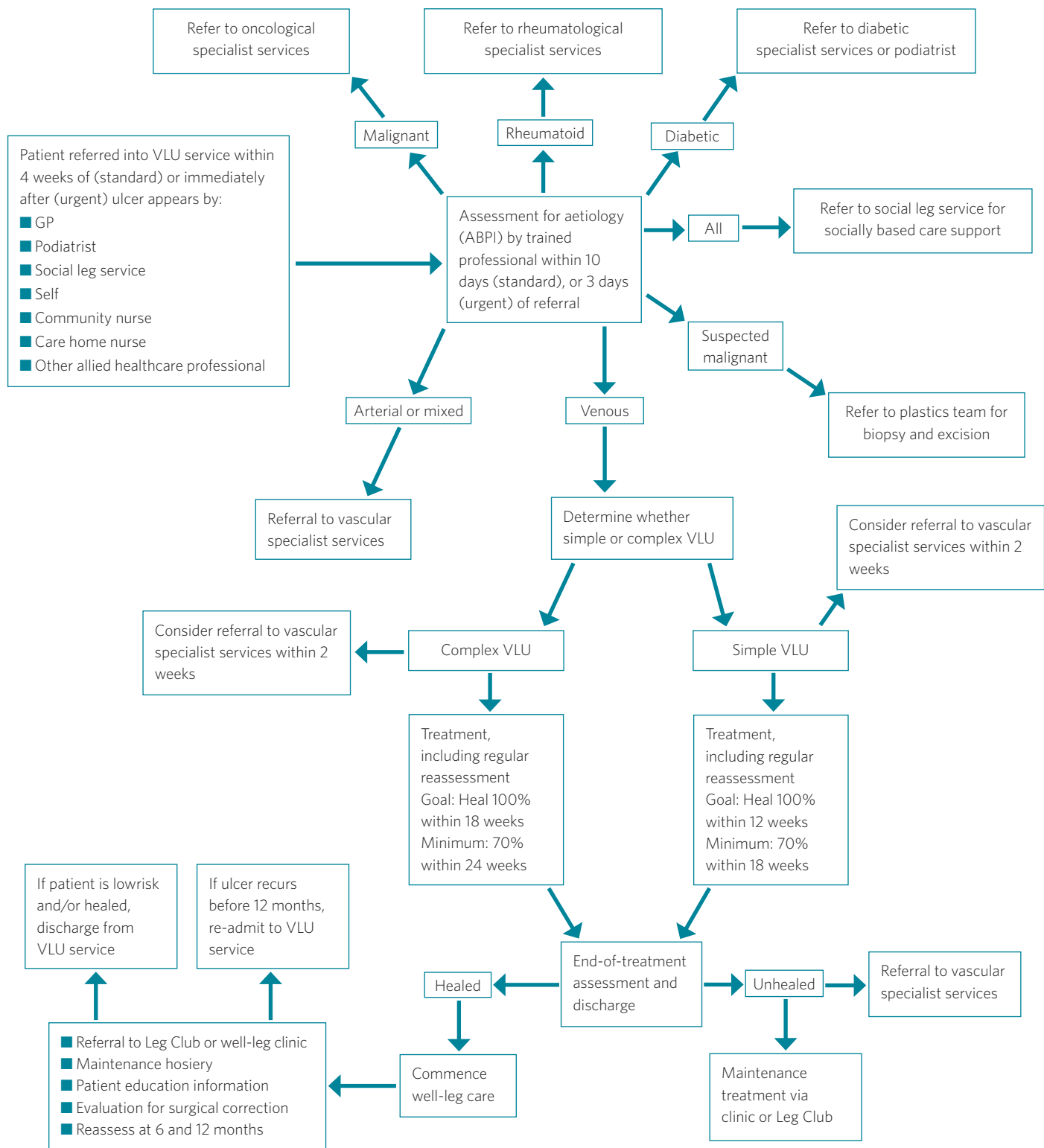
Care can be disparate across healthcare regions and within a region, between patients who receive care at a leg ulcer clinic and those who do not. Anecdotally, patients often present at specialist clinics with leg ulcers without having been properly assessed and, sometimes, lacking a diagnosis. The combination of a desire to try everything before referring, combined with time pressures and patient volumes, can result in delivery of suboptimal treatment and late patient presentation. Further, in some areas, leg ulcer services are not well developed.

Services need to be optimised to provide a higher standard of care, which includes shared referral pathways for early diagnosis and appropriate treatment. The remit of a VLU service should be to minimise the number and severity of ulcers seen by the service in the long term by:

- Being proactive in preventing the development of ulceration in the local population
- Identifying high-risk patients and treating the underlying disease
- Ensuring early referral into the service by having clear criteria and pathways
- Improving outcomes by healing VLUs quickly and efficiently as possible
- Recognising hard-to-heal ulcers early and employing advanced treatment strategies to heal the ulcer
- Reducing the ongoing effects of chronic disease
- Preventing occurrence and recurrence
- Improving patient quality of life and satisfaction with care
- Appropriately using resources.

As NHS services must now be commissioned in England, services will increasingly need to state their goals and demonstrate and explain performance to commissioners — actions important in any nation or setting.

Figure 1: How the VLU service fits in the referral pathways



Planning an ideal VLU service

Venous leg ulcer services can sit within tissue viability, vascular or community nursing services. Regardless, it's important VLU care be evidence-based, supported by the multidisciplinary team (MDT) and inclusive of the multiple factors involved in planning a service. So long as the approach is well-coordinated and delivers optimised patient outcomes, no one model is best. Consider and analyse the following factors as accurately as possible at the initial planning stage (see Box 1).

THE SIZE OF THE PROBLEM

To determine resource need and service size, estimate the local VLU prevalence and incidence. Perform a scoping exercise over local clinical and social areas to produce figures to work with. Most patients with VLUs are managed in the community; carry out an audit of district and practice nurses' caseloads. Work with primary care practitioners to increase receptiveness and accuracy of data collection. Use the scoping exercise data to identify gaps in existing service provision and inform resource use and planning.

INTEGRATION AND COORDINATION WITH THE MULTIDISCIPLINARY TEAM

The VLU service will need to work with existing services for long-term care and support self-care (see Integrated Care 2, page 4). Consider how acute and community services will be integrated to provide the most effective service for patients that is equitable and accessible. Strong clinical leadership is key.

To ensure cohesive integration and coordination, the VLU service should be planned and led by a clinician who has the necessary knowledge and project management skills to implement evidence-based VLU care with support from the MDT. When services are coordinated with regular support from either the tissue viability service or another team/person who has sufficient knowledge of VLU to provide advice/training, outcomes are shown to improve (Dowsett, 2012). The VLU service coordinator should ascertain the relevant disciplines required to provide optimal care and how the MDT members will be involved in the new service (see Figure 2). The coordinator should advocate for the service

BOX 1: Questions to ask and answer before starting a VLU service

1. What is the prevalence and incidence of VLUs?
2. Where are the gaps in services and how should it integrate with other services?
3. Who are the MDT members?
4. What are their roles and training requirements?
5. How to tell others about your service/how to market services?
6. How accessible is the service (ie, is it part of a referral pathway??)?
7. What equipment is needed?
8. What are the costs?
9. Is the service sustainable?

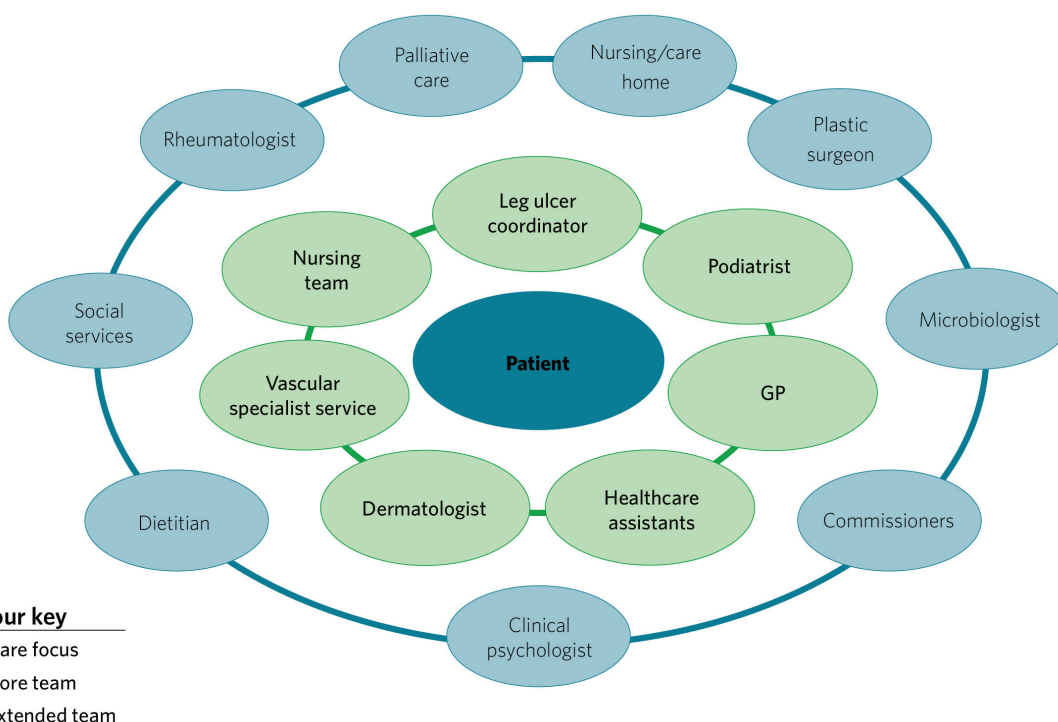


Figure 2: Key clinical stakeholders in a VLU service

Notes: Based on local availability and need, the members of the core and extended teams might vary. Further, the clinical tasks roles carried out by the multidisciplinary team members should be defined according to the needs of the individual patient.

INTEGRATED CARE 2: A social model of care

A patient can also be referred to a Leg Club® or, where there is not a formal Leg Club, such socially based care can be organised to offer an alternative social model of care.

The Leg Club model (Lindsay, 2004) was conceived as a unique partnership between the district nursing team and the local community, in which patients become stakeholders in their care delivery, empowered to make informed decisions and take ownership for their treatment and continuing well-leg maintenance.

By providing leg ulcer care in a group environment, where patients are treated collectively and allowed to share their experiences and gain peer support, the model can effectively address many patient-centred issues — particularly when used alongside a well-planned clinical decision-making pathway.

RESOURCE 1: Competency framework

Guidance for producing a competency framework:

www.nursingtimes.net/developing-a-framework-to-assess-competence-in-leg-ulcer-care/199926.article

and build relationships by gaining the support of key stakeholders (including patients), along with commissioners and potential commissioners in order to design, develop and deliver the new service that is fit for purpose.

ROLES AND TRAINING

Roles should be identified and a comprehensive and ongoing education/training programme developed or sourced to reflect the needs of all practitioners and the need of the service. This includes having the right mix of staff (generally, qualified nurses, healthcare assistants and associated clinicians with specialised training in leg ulcer management, and administrative support) to cover a range of clinical competencies. It is important to remember that the registered practitioner remains responsible for the patient's care when delegating responsibility.

When planning the service, assess staffing levels, resources and skill mix. Using scoping exercise data can help determine predicted caseload, which can in turn be used to estimate needed staff.

Staff should be motivated, passionate and focused on safe, evidence-based, patient-centered care that is documented clearly, accurately and in a timely manner (DH, 2012b). The NHS nursing strategy calls for staff to exhibit the so-called six Cs: care, compassion, competence, communication, courage and commitment (DH, 2012b). Having staff who prioritise these factors will make the difference between an average and a highly effective service (SIGN, 2010).

Staff must also demonstrate key competencies in VLU management or be willing to have training to develop their skills. At the outset, a competency framework (see Resource 1) should be drawn up against which to measure prospective staff (Lymphoedema Framework, 2007). Necessary specific skills for trained staff undertaking initial patient and ongoing assessment and treatment include:

- Ability to take a full patient history, assess the wound and document findings in the healthcare record
- Ability to undertake vascular assessment, including ankle brachial pressure index, using an appropriate tool such as hand-held or waveform Doppler (RCN, 2006)
- Ability to make a differential diagnosis based on the assessment
- Ability to measure limbs and apply compression therapy as per protocols (RCN, 2006; SIGN, 2010)
- Knowledge and skill to select appropriate dressings as per standards for wound management
- Demonstrate strong communication and interpersonal skills
- Specialist knowledge of VLU management with an ability to train others in optimum leg ulcer care in patient's home and in nursing/care homes
- Able to transfer knowledge to patients to encourage proactive involvement with their conditions
- Understands hosiery options for healed patients, including measuring and selecting hosiery
- Promotes patient concordance with treatment.

ACCESSIBILITY AND TRANSPORT

An ideal VLU service would be located based on population demographics and where patients are most likely to be referred from/to, with easy access to transport links and ample parking for patients, carers and staff. A cost-effective, reliable transport system might be required if patients are to be brought to the VLU service. The physical building should comply with national standards for easy access. Consider the needs of patients who are not able to travel and will need home-based care, or those who prefer socially based care, typically conducted in community settings, such as village halls, care homes and church halls (see Integrated Care 3, page 5). Also consider the future needs of the service and the location's capacity for growth and changes.

EQUIPMENT

Some premises might already be equipped; others might require that equipment and furniture be sourced and installed. The coordinator will need to put together a list of all items required based on

the model of care and size of the service (see Appendix 1, page 17). It is important to perform a risk assessment, in line with current regulations, of all premises and equipment likely to be used to ensure compliance with safety and infection control standards.

MARKETING AND COMMUNICATIONS

Consider how to best promote the service. How will other healthcare professionals know the service exists, what it offers and how to refer patients to it? Knowledge and awareness of venous disease among the public is low, and VLUs are perceived to be a problem faced by the elderly. In addition, because VLUs are not linked to Quality and Outcomes Framework points, primary care practitioners don't highly prioritise them. Marketing can raise awareness about the service's offerings and how early treatment can help prevent complications linked to disease progression. Disseminate information through a variety of channels (including posters and videos) depending on available resources and accessibility. Consider innovative approaches and target pharmacies, libraries (eg post flyers), gyms, community halls and GP surgeries. Work closely with commissioners to ensure they are involved in the process and will support new working practices and influence GPs.

COSTS

It will be important to show the cost of delivering an effective service, including staff, equipment (allowing for depreciation) and premises. Any Qualified Provider (AQP) guidance (NHS Supply2Health, 2012) suggests estimating length and costs of direct (eg patient care) and indirect (eg record-keeping and other governance tasks) time, 'non-pay costs' (eg dressings and one-time-use equipment) and overheads (eg non-clinical staff costs, facilities costs, capital equipment costs, utilities, travel costs). Develop a working relationship with finance and contracts teams where available.

SUSTAINABILITY

Continually monitor capacity to meet demand and throughput (see Resource 2). To determine sustainability in an ongoing manner, follow these 'seven steps to measurement':

1. Decide aim
2. Choose measures
3. Define measures
4. Collect data
5. Analyse and present
6. Review measures
7. Repeat steps 4 through 6 (Ward et al, 2010).

Defining the service's aims and how they will be measured in advance will help give the VLU service structure, will provide a basis for sustaining improvements, maintaining standards and meeting health outcomes over time (Ward et al, 2010). The NHS Institute further recommends organising care, building processes, and hiring and training staff around the service's goals (Ward et al, 2010).

INTEGRATED CARE 3: Costs of social leg services

Social leg services are staffed by volunteers from the local community, including a steering committee, who provide services such as administrative support, refreshments and transport. Fundraising within the community provides for hiring of premises and the purchase of specialised equipment such as Doppler ultrasound and digital cameras.

RESOURCE 2: The sustainability model and guide

Download the sustainability model, an easy-to-use diagnostic tool, and the sustainability guide, a step-by-step advice manual:

www.institute.nhs.uk/sustainability_model/general/welcome_to_sustainability.html

Delivering an ideal VLU service

BOX 2: Eight key features/goals of the ideal VLU service

1. Clear inclusion and exclusion criteria
2. Easy referral into the service
3. Equity of access to services
4. Timely expert assessment for accurate diagnosis
5. Comprehensive service provision
6. Access to the MDT
7. Effective and ongoing audit
8. Patient involvement

The ideal service will be safe, effective and personalised. Knowing what the ideal service looks like can help inform the development of new or existing services. The consensus group identified eight key features/goals of the ideal service (see Box 2). Keep in mind that local factors and resources and creativity of service design will determine how each goal is achieved.

1. CLEAR INCLUSION AND EXCLUSION CRITERIA

To function efficiently, the service must have a clear scope, setting out which patients it will accept and the level of service to be provided for ongoing support and care of VLUs. The inclusion and exclusion criteria should be publicised to anyone who might refer in.

Similarly, a list of exclusion criteria must be drawn up at the start. Likely exclusions would be children (younger than 16) and patients, for example, with a co-existing problem such as diabetic foot ulcer, skin condition, or malignancy, who would need to be treated outside of the service. However, it is important exclusion criteria do not delay appropriate referral.

To treat or refer patients in line with the inclusion and exclusion criteria, the consensus group agreed that all adult patients referred with lower-limb ulcers irrespective of aetiology should be accepted and assessed. This is based on the premise that, until a competent practitioner has performed a comprehensive assessment, the aetiology of the wound remains unknown. This lets the service refer patients with significant arterial disease, claudication or ulcer of mixed aetiology to other specialists for appropriate interventions (eg vascular surgery; see Figure 1, page 2).

In support of the inclusion and exclusion criteria, the functions of the VLU service — ie what patients can and cannot expect — should be made clear to patients so their expectations are realistic. It will be beneficial to post this information as widely as possible (eg online, in GP surgeries, leaflets distributed within the care plan).

Clear inclusion and exclusion criteria

Ideal: Assess all patients with a leg ulcer. If the wound is not venous, refer back to the source or onward to the appropriate service (eg vascular services).

Minimum: Accept all patients with a VLU who meet the agreed inclusion criteria.

Note: Some services will treat ulcers of mixed aetiology, but this document focuses exclusively on VLU services.

2. EASY REFERRAL INTO THE SERVICE

Create clear referral pathways so patients with VLUs can be quickly admitted to the service from across the healthcare settings — including referrals from community nurses, GPs, practice nurses, hospital specialists, podiatrists and patients themselves. If a patient has already used the VLU service, they could be allowed to refer themselves back in (eg for up to 12 months) (see Integrated Care 4, page 7).

There should be a mechanism in place for informing the patient's GP to ensure records are up to date across providers. Shared care records will minimise the number of communications that need to be relayed, which will save time, increase productivity and decrease opportunities for mistakes. Providing referral information to professionals on how and when to refer to the service, in a variety of formats, will optimise entry to the service.

Healthcare professionals need to understand early referral's importance to optimising outcomes. Evidence suggests that GPs often need support in knowing when to refer and how to appropriately assess and manage patients with venous disease (McGuckin and Kerstein, 1998 ; Templeton and Telford, 2010). Strengthening the service's links with GPs, community nurses and other allied

professionals will help to raise awareness of early signs of venous disease and when to refer. Good referral pathways cannot be under-estimated, as they guide patients into needed services, meaning patients get the right treatment at the right time.

Easy referral into the service

Ideal: All patients should be referred as soon as a VLU is suspected.

Minimum: All patients should be referred within four weeks of onset of lesion if there is no improvement or if aetiology is unknown.

Note: Some services will treat ulcers of mixed aetiology, but this document focuses exclusively on VLU services.

3. EQUITY OF ACCESS TO SERVICES

A VLU service should aim to provide a high standard of care regardless of the setting (home-, clinic-, hospital- or non-medical/community-based). This is often challenging and will depend largely on the skills and competencies of the staff delivering the service. Other challenges are access to equipment and appropriate premises, which can be addressed by performing and using the results of impact-equality assessments to drive decision-making about logistics.

Previous reports have concluded clinic care is superior to home care at improving leg ulcer healing. However, one Canadian trial showed that organisation of care — rather than setting — is the crucial factor (Harrison et al, 2008). Researchers found that, when quality wound care was supported with a service model (ie according to evidence-based recommendations and delivered by a well-trained, dedicated nursing team), similar healing results can be attained regardless of home or clinic setting. Many VLU services that were originally clinic-based now reach out to patients in their homes to ensure the service is equitable.

Home-based

Many patients with VLUs have reduced mobility and are cared for in their own or care homes. The specialist VLU service nurse usually carries out a joint visit to the patient's home with the community health professional who provides day-to-day wound care. Often the specialist might review a wound only once or twice, then monitor progress by liaising with the healthcare professional involved. If the wound is particularly complex, specialist review might be more frequent.

Increasingly, patients chose to self-manage at home. In such cases, treatment/management options should account for patients' practical and cognitive abilities. The treatment plan should include:

- clear guidance about when and how patients should contact a clinician for advice and support
- monthly review of the treatment plan
- repeat Doppler assessment every 12 weeks, as stated in local policy, or when the patient's condition changes (eg increased pain).

Options for delivering care in the home to patients who cannot attend clinics:

- **Telemedicine.** This incorporates electronic patient records and secure software that can measure wounds remotely and estimate healing time. This lets healthcare professionals transfer information electronically, facilitating coordinated working and improved care delivery. Telemedicine can also empower housebound patients regarding their VLU care, provide access to visual evidence of ulcer healing progress and allow swifter referral to a specialist (Summerhayes et al, 2012; Vowden and Vowden, 2013).
- **FaceTime/Skype.** This can also facilitate the demonstration of bandaging technique for training purposes and be used to hold a virtual clinic for housebound patients, giving them access to specialists and the same level of care instruction as clinic patients.

INTEGRATED CARE 4: Self-referral pathway

Self-referral is consistently one of the most common sources of attendance at social leg service events such as Leg Clubs, which provide informal, drop-in facilities. Easy access and an unthreatening non-medical setting encourages people of all age groups to seek advice when they might not consider attending a formal clinic or surgery. This presents an ideal environment for opportunistic and early diagnosis, health promotion and prevention of more advanced lower-limb problems — particularly when the social service works as a gateway to a VLU service. Encouraging self-referral into the social group as well as into the VLU service can, therefore, improve healing and recurrence rates while helping patients who might be socially isolated and/or older to reintegrate into their communities.

- **Mobile patient management systems (eg iNurse).** Community clinicians can record and communicate patient information at the point of care, using smartphones or tablets.
- **Walk-in/community services.** These can support self-care patients or family members/carers who become 'expert patients'. When a problem arises, patients can access the service immediately via walk-in services or community nurses.
- **Text messaging.** These can be used to remind patients about in-home and in-clinic appointments.

Clinic-based (community/hospital)

Patients who attend the VLU clinic usually do so once a week (at minimum) for active ulcer treatment. This might be more frequent in the initial stages of treatment to ensure effective compression as oedema reduces (Moffatt, 2007). Patients should have access to appropriate equipment and specialist staff who have close working relationships with the rest of the MDT. See Accessibility and Transport, page 4, for more details on location and premises.

To deliver equity of care across all settings, it is important to train and educate all staff to ensure they are equally competent in providing all aspects of patient care.

Equity of access to services

Ideal: Equal care and access to treatment/specialists is available to patients in all settings, across localities and within specified time frames.

Minimum: The patient has access to a VLU service if the wound is not responding to best treatment after four weeks.

4. TIMELY EXPERT ASSESSMENT FOR AN ACCURATE DIAGNOSIS

Patients should receive a comprehensive assessment within 10 working days of referral to establish the underlying aetiology of the ulcer (NHS Supply2Health, 2012). When deemed urgent, assessment should be done within three days of referral. Triage by phone or remote video can be done to help prioritisation.

On presentation, a comprehensive assessment should be taken, including:

- Venous risk factors (Newton, 2010), arterial risk factors or comorbidities (SIGN, 2010)
- Wound condition, including accurate measurement of ulcer size, location and status of wound bed (RCN, 2006; SIGN, 2010)
- Clinical signs and symptoms of wound infection, including pain (SIGN, 2010)
- Skin condition (spreading cellulitis might require urgent antibiotics before the patient can be seen in the VLU clinic)
- Size and shape of limb(s)
- Handheld Doppler to measure the ankle brachial pressure index (ABPI, to ascertain the level of arterial disease and to aid decision-making when selecting the appropriate treatment regimen) (Vowden and Vowden, 2001; SIGN, 2010).
- Patient-specific factors, including mobility, sleep, psychological and social impact, weight, diet, wound history, understanding of VLU and the care plan, and ability to carry out self-care.

Thorough assessment improves the ability to accurately diagnose and triage patients, with referral back to GPs or onward as appropriate for patients with mixed or arterial disease ulcers (Gardner, 2013). This means the right patients are connected to the right specialists, which more efficiently uses time and resources. The reasons for referral need to be made clear to patients so they understand they are being referred elsewhere to receive more appropriate care. Patients with venous disease will be categorised as simple or complex ulcers and follow the appropriate treatment pathways (see Figure 1, page 2).

Timely expert assessment for an accurate diagnosis

Ideal: Patients receive comprehensive assessment within three days of referral.

Minimum: Patients receive comprehensive assessment within 10 days of referral.

5. COMPREHENSIVE SERVICE PROVISION

The VLU service should aim to provide services and care that broadly can be divided into:

- Treating of simple and complex ulcers (see Box 3)
- Preventing avoidable ulcers (ie reducing the incidence of primary VLUs)
- Avoiding recurrence of ulcers.

Simple and complex ulcers

Most patients referred into the VLU service will have an existing ulcer. For patients with a VLU, compression therapy is recognised as the gold-standard treatment. Healing rates of greater than 50% are achievable within 12 weeks (Dowsett, 2012; Vowden and Vowden, 2012).

The aim will be to heal simple ulcers within 12 weeks (AQP guidance in England requires 70% within 18 weeks), and to treat and heal complex ulcers within 18 weeks (AQP guidance requires 70% within 24 weeks). Healing rates such as these, although vastly different from those seen in many regions of the UK, have been achieved and have even been exceeded (Gardner, 2013; Dowsett, 2011). It is important to remember some complex VLUs will take longer to heal (see Box 4) and may require the involvement of a vascular specialist.

Refer nonhealing VLUs (ie, those that fail to move towards healing by four weeks) to a complex wound clinic or a vascular specialist or department within two weeks of determination of nonhealing status. Developing a good relationship and referral pathway between services such as these (depending on local availability) is key for ensuring that patients who are not responding to compression will routinely be sent for specialist care.

Prevention of avoidable ulcers

Prevention is a key NHS strategy for maintaining public health and minimising the burden on healthcare. Successfully preventing VLUs depends on early patient presentation. However, awareness of early signs of venous disease is poor, and patients often delay in presenting until the development of an ulcer.

Educating the public about the risk factors and early signs of venous disease is key to the service's prevention work. The support of local GPs, practice nurses and pharmacists — who engage in often-overlooked preventive work — is essential to ensure that primary care does not become a barrier to early entry into and assessment by the VLU service.

Prevention messages should focus around:

1. The causes, early signs and progression of venous disease
2. Prevention measures (eg good skin care, compression, exercise)
3. Early referral in line with guidelines (eg NHS Supply2Health, 2012 ; NICE, 2013)
4. After-care.

Avoiding recurrence of ulcers in healed patients

Patients need to understand why ulcers occur and the importance of wearing compression for life to prevent recurrence. This will involve talking to them about lifestyle issues, as well as prescribing the appropriate compression garments to ensure concordance (Vowden and Vowden, 2012).

Edwards et al (2003) found patients poorly understood what they could do to help their ulcers heal, although they better understood what prevented their ulcers from healing. Only 40% understood the term 'venous', and 9% understood that 'trauma' meant a knock, with most respondents assuming it related to shock or distress. Forty percent of patients claimed they had not received information about leg ulceration, which highlights the importance of providing patients with education in a number of

BOX 3: VLU type definitions (NHS Supply2Health, 2012)

Simple VLU

ABPI >0.8-<1.3; wound area less than 100 cm²; duration shorter than one year

Complex VLU

ABPI >0.8-<1.3; duration longer than one year from first presentation; lymphovenous disease (although, in some circumstances, this comorbidity will not necessarily result in a classification of complex VLU, but this should be determined with providers/local specialists); current infection and/or history of recurrent infections; patient non-concordance.

BOX 4: Current guidelines and payment targets (NICE, 2013)

Current NICE guidance/targets state simple VLUs should be healed within 12 weeks and complex VLUs within 18 weeks. Payment targets are based on average treatment times. Some patients (eg those with simple VLUs) will, if treated appropriately and quickly, heal in a much shorter time. Some patients with complex VLUs, despite appropriate and timely care, will take longer than average. It is important to capture this data so VLU services can work out the correct tariff with commissioners and also give patients realistic expectations.

INTEGRATED CARE 5: Follow-up care and well-leg clinics

Follow-up care by social leg services is an essential part of preventing recurrence, and the promotion of a well-leg regimen. Once healing has been achieved, patients (members) should be transferred to a lifelong well-leg regimen in which they receive a full reassessment at regular intervals according to local protocols. This includes Doppler assessment to ensure the ABPI remains satisfactory and, before prescribing new hosiery, re-measuring the patient to ensure the garment is correctly fitted. Audit data have demonstrated that systematic well-leg checks and ongoing health education have reduced VLU recurrence (Dowsett, 2011).

formats, eg posters, leaflets, audio, videos, YouTube or conversation, so the patient can ask questions. The primary ways of avoiding recurrence include:

1. Treating and managing the underlying disease (eg with vascular intervention)
2. Maintaining compression at the highest tolerable level
3. Minimising the risk of skin damage and maintaining good skin care
4. Promoting mobility/exercise/lifestyle factors
5. Facilitating early referral back into the VLU clinic eg, self-referral/walk-in services
6. Supportive after-care programme in which patients are followed up by the service
7. Referral to vascular surgeon for assessment and intervention where appropriate
8. Using patient-centered care plans and referring to patient support groups
9. Regular review and support from the healed leg ulcer clinics.

Well-leg clinics for after-care

Once a patient's VLU has healed, he or she is often discharged with a care plan and followed up in a 'well-leg' clinic. These clinics are based on an open-door policy (often time-limited) and dispense ongoing advice and support patients in helping to maintain healthy legs. They may also re-measure for and renew hosiery. The care plan should focus on the importance of ongoing good skin care, regular exercise, use of compression and recognising early signs of recurrence/re-evaluating diagnosis.

Attendance at the well-leg clinic lets the nurses check that the patient is comfortable wearing compression correctly, that compression remains effective and that the patient's legs are free from early signs of skin breakdown/disease progression. Nurses can then refer patients back to the VLU service for further assessment and treatment if required. Well-leg clinics support a greater level of concordance with compression hosiery (Dowsett, 2011) and are integral to the Leg Club model (see Integrated Care 5).

Comprehensive service provision

Ideal: Simple VLUs are healed within 12 weeks and complex VLUs are healed within 18. Healed VLU patients are followed up for a year, so any recurrence in that time is dealt with immediately within the service.

Minimum: Seventy percent of simple VLUs are healed within 18 weeks, and 70% of complex VLUs are healed within 24 weeks. Patients have access to well-leg follow-up services.

6. ACCESS TO THE MULTIDISCIPLINARY TEAM

VLUs are often seen to be a community issue. However, all current guidance and evidence suggests that the management of a VLU cannot be done in isolation and needs the involvement of the MDT (see Figure 2, page 3). It is vital that patients be seen in the appropriate timescales to avoid complications, and for patients with complex ulcers to be referred for specialist intervention. Ideally, the MDT should include a vascular surgeon or have strong links with the acute vascular service.

To develop an MDT, the VLU service coordinator should set aside time for relationship-building and meeting professionals from other services/departments. By inviting allied professionals to visit the VLU service and finding opportunities for joint education and training, it can be easier to identify the various roles of the MDT within the VLU pathway and agree referral pathways.

Access to the multidisciplinary team

Ideal: Patients and staff have access to an MDT covering all specialties, organised and integrated by the leg ulcer coordinator to ensure ease of the patient's journey through the pathway.

Minimum: Patients and members have access to a MDT covering key specialties (vascular surgeon or acute vascular service, podiatrist and tissue viability nurse) and good links/referral pathways to the other specialties.

7. EFFECTIVE AND ONGOING AUDIT

Data collection and audit are important methods for addressing inequalities of care and in prioritising services that demonstrate improved outcomes (Dowsett, 2011). Effective audit requires continuous recording of agreed measures, centralised patient records and a focus on local needs. Agreed measures should be chosen for their relevance to practice and the VLU service, as well as to meet any regulatory requirements, and should be chosen with strengths and opportunities in mind. That is, the results should be used to both identify service issues and make the business case for the service (see Making the Case for VLU services, page 12).

The data can be used to benchmark — identifying and implementing best practice by understanding the effect care has on the outcome and quality of life for the patient — and to show commissioners how effective the service is in terms of healing rates and patient satisfaction. It can also identify areas for improvement and be used to facilitate change (see Box 5, page 13).

Effective and ongoing audit

Ideal: Perform audits that let data be collected consistently and reliably on a range of measurables — including measuring patient outcomes and evaluating service efficacy, efficiency and cost-effectiveness.

Minimum: Perform audits that target the types of data listed in the Ideal, above, using a minimum data set.

8. PATIENT INVOLVEMENT

Clinicians need to deliver efficient care in a caring and supportive way. When patients are involved in decision-making (Hopkins, 2004; International Consensus, 2012) clinicians can improve patient concordance with medical advice by tailoring treatment to individual patients' needs and desires. This might require balancing evidence-based care with what patients will accept and use, but is important for improving concordance. For example, if an elderly patient cannot tolerate the indicated level of compression or is unwilling based on a previous experience of pain, the clinician might need to be pragmatic and apply reduced compression to re-introduce compression to gain the patient's trust (Vowden and Vowden, 2012; Beldon, 2013).

However, ensuring concordance with compression therapy remains a challenge. Listening to a patient to understand important lifestyle factors can help to find solutions (Moffat, 2004). This may include assisting patients in their ability to self-manage by changing dressings more frequently to prevent strikethrough and improve comfort levels, and by providing compression garments that can be removed and reapplied by the patient. The idea is to reduce the impact of living with a VLU which, in turn, encourages patients to comply with their treatment regimens. Industry also has a role to play in providing products, informed by clinicians, that meet the needs of patients.

In addition, there is anecdotal evidence that including in the MDT a clinical psychologist who is available for patients during clinic times can have positive effects on patient concordance. If this isn't a practical option, an alternative is to train VLU service staff in motivational interviewing (Rollnick et al, 2010), which might prove to be more cost-effective.

Patient involvement

Ideal: Achieve 100% patient concordance with treatment, using the services of a clinical psychologist where necessary, depending on the individual.

Minimum: Identify level of patient concordance and develop an action plan to improve towards 100% patient concordance. To this end, train VLU service staff in motivational interviewing techniques for use during care.

Making the case for VLU services

RESOURCE 3: VLU service implementation pack

Access the NHS's Any Qualified Provider VLU implementation pack:

www.supply2health.nhs.uk/AQPResourceCentre/AQPServices/PTP/WoundHealing/Pages/Home.aspx

When improving or creating a VLU service, the first step is to outline current service provision, if any, exploring intended service design/redesign, the reasons these developments are needed, and information that supports the business case for the existing and/or future service. Making the business case for any service is a matter of identifying the current strengths and opportunities in what exists and the changes that can be made to take better advantage of the opportunities. The AQP scheme specifies guidance for making the business case for a VLU service; it is by no means appropriate for all service models, but it can provide a starting point that can be adapted to the local needs of individual VLU services (see Resource 3).

AQP has been introduced by the government in England as a way of driving up quality, enabling innovation in services and empowering patients by letting them choose their care provider. New government drivers are prioritising the patient experience/journey through the NHS and are reflected in the use of Patient Reported Outcome Measures (PROMs) and Patient Reported Experience Measures (PREMs) in England (DH, 2012a). In addition, the introduction of 'choose and book' has increased patient choice and the need for clinicians to involve patients in the decisions about their care and where they receive it (DH, 2010). Patients are therefore seeking appropriate service delivery with appropriately trained staff providing high-quality care without delay, to improve quality of life, reduce pain and suffering, and decrease incidence of non-healing wounds (Ousey, 2011).

We already know that VLU services are vital to the healthcare system:

- An estimated 70,000–190,000 individuals in the UK have a VLU at any time (Posnett and Franks, 2008). This equates to 0.3/1000 (men) and 0.5/1000 (women) (Moffatt et al, 2004; Vowden and Vowden, 2010).
- The cost to the NHS of treating patients with VLUs was estimated to be £168–£198m annually (2004 prices) (Posnett and Franks, 2008).
- In many cases, leg ulcers can persist for over a year, with healing rates falling significantly after this time delay (Moffatt et al, 2004).
- Recurrence rates in the UK have been reported as being as high as 71–76% (Palfreyman et al, 2007; Brassard and Wang, 2002).
- VLU services that focus on preventing recurrence in patients with healed ulcers have been shown to reduce recurrence rates from 18–20% to 5.8% (Dowsett, 2011).
- VLU services are a critical factor in achieving NHS targets (SIGN, 2010).

With the advent of clinical commissioning groups and AQP in England, VLU services will need to show the benefits they offer to receive continuing authorisation to provide services under or alongside the NHS. To achieve this, VLU services must monitor and evaluate their performance — and use the resulting data to identify areas for improvement.

CLINICAL AUDIT

Clinical auditing is a process that seeks to improve the quality of everyday care provided to patients. Where services are performing well, it provides information to confirm the quality of that clinical service.

A good audit should be an essential part of setting up a service for clinical, research, management and financial reasons (Douglas and Simpson, 1995; Campbell et al, 2005), and requires targeted data collection. Best practice guidelines for conducting audit have been developed (NICE, 2002). A well-conducted audit needs careful planning and the tools to collect the right information (see Resource 4).

To measure the ability of the service to meet patient demand, it is important at the outset to decide the most relevant data to collect (see Box 5, page 13). This should focus on both process and outcomes. For example, recording how many patients have been seen in a week is less informative than recording what happened to those patients: ie, were they referred, discharged for self-care, satisfied with the service?

RESOURCE 4: Audit tool

Downloadable, straightforward guidance regarding forms, parameters and data usage:

<http://emedia.wounds-uk.com/video/medi/harrogate2011/downloads/audit-tool.pdf>

BOX 5. Process and outcomes data to collect

Examples of data that can be collected at baseline and on an ongoing basis, to monitor performance against guidelines include:

- Number of patients referred into the service
- Where patients are referred from
- Appropriateness of the referral
- Time from presentation to Doppler assessment
- Time to access specialist VLU clinic
- The number of patients with simple and complex ulcers (with rationale for classification)
- Use and type of compression therapy (with evidence of concordance)
- Healing rates at 12 and 24 weeks for simple and complex ulcers
- Average and median times to healing
- Recurrence rates (eg at 1 and 3 years)
- Infection rates
- Frequency of infection or other complication
- Frequency of visits
- Numbers and rates of recurring ulcers
- Average time to recurrence
- Where patients were treated
- Where patients go from the service (eg well-leg clinics, services such as dermatology, vascular, etc.)
- Numbers of patients referred to secondary care
- Numbers referred into research
- Correlation of outcomes with localities and settings
- Patient reported outcomes and experience measures (PROMs and PREMs)
- Estimated hospital admissions or A&E visits avoided
- Whether prescriber and patient came to an agreement about the care regimen
- Correlation of concordance levels with healing rates

Process and outcomes data can be used to produce an action plan outlining problem areas and potential solutions. However, collecting data is not enough — raw numbers alone rarely provide accurate insight.

Analysing data such as those in Box 5 will be vital in determining whether the current VLU service meets the criteria for best practice (RCN, 2006; SIGN, 2010) or the performance criteria set by local commissioners (NHS Supply2Health, 2012). To ensure the right data are collected, consider working with someone (eg local performance team) who understands data collection and statistical analysis to advise on the best tools to use. Statistical process control (SPC) can be used to gather information and is recommended for analysing measurements at all stages of a project (see Resource 5). SPC can be used to get baseline information, to review whether changes will make a difference, and to determine the value of making a change.

SUITABILITY OF DATA FOR ONGOING COLLECTION

It is important to ensure that what is measured is relevant to the needs of the service and satisfies the commissioners' requirements. For example, use incidence data (reflection of risk — ie how many people have an ulcer within a set time period) not prevalence data (how widespread — ie how many people simply have an ulcer). This is because the prevalence of complex recalcitrant wounds will be high, but these may well be wounds that have not healed and have been counted again and again over time. Incidence data will reflect how many new ulcers occur within the local population/service.

In addition, data need to reflect whether those ulcers are newly occurring (incidence data), are recurring ulcers (same limb) or are new ulcers on a different limb but the same patient. Information collected

RESOURCE 5: Statistical process control (SPC)

Further SPC information:

www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/statistical_process_control.html

INTEGRATED CARE 6: Improving concordance and outcomes

The unique physical and social environments of social leg services facilitate the sharing of lived experiences and the telling of patient narratives. Collective treatment and sharing encourages patients to take an active interest in their treatment and care options, thus providing a sense of wellbeing and enhancing patient concordance (Hawkins and Lindsay, 2006). Published research (Hopkins, 2004) has highlighted a link between loss of social contact, loneliness, social isolation and lack of motivation, high levels of recurrence and poor clinical outcomes — areas, the research noted, that were not always best addressed by medically based clinics. Social leg services can therefore enhance patient perception of quality of life by helping improve healing rates, engendering positive health beliefs (eliminating sick-role behaviours), improving morale and reducing pain levels.

and reported in this way will help to measure the success of the VLU service's prevention work and provide an important benchmark for commissioners. However, the difference between recurrence and occurrence is often misunderstood, which may affect the accuracy of the data collected.

It is important to remember that data must be used in context. For example, it should be explained in business documents that better prevention, quicker diagnosis and targeted treatment with the use of appropriate treatment pathways, will lead to a higher percentage of more complex ulcers being seen by the service (the simple ulcers having been healed). Therefore, a good service is not necessarily represented by low numbers of complex wounds, but rather by the number of ulcers referred in and the outcomes for those wounds.

Bromley Healthcare (2013) monitored its newly implemented VLU assessment service to audit for success and found that, on average the service reduced healing time for ulcers from 20.7 to 5.7 weeks. Such results have been achieved alongside high patient and practice nurse satisfaction (Bromley Healthcare, 2013), a combination of measures more indicative of a good service than raw initial numbers of VLUs seen. The future of Bromley Healthcare's VLU service reflects its success: the pilot programme was extended by six months, and the service is exploring expansion to include 48 GP surgeries (2013).

Case studies by Dowsett and Elson (2013) have shown that changing the delivery of the service model can greatly increase patient quality of life. The authors reported on embracing new care pathways for simple and complex VLUs, and using a 'nurse-led model designed to reduce inappropriate referrals to secondary care' that included face-to-face patient assessment, a focus on concordance with and self-management of treatment, timely reassessment and follow-up care, and communication with the patient's GP. They found that patients enjoyed improved mobility and quality of life, along with progressing towards healing.

EVALUATING PATIENT NEED AND SATISFACTION

Although measuring productivity and outcomes is important, positive results can be achieved only with an approach that considers how care is delivered, and what patients want and need (see Integrated Care 6). Patient involvement is vital for audit, and their feedback can provide useful information and data on areas of the service that need improvement (Clark, 2012; Thompson, 2012). Patient need is largely illustrated in England by PROMs and satisfaction by PREMs.

PROMs measure healing rates, non-healing rates and numbers of patients referred to specialist services, to quantitatively determine patient outcome. PREMs are more subjective, comprising qualitative information and, as such, are more difficult to influence. PREMs represent patients' reported experiences of the care received. This will be individual to each patient and may not always be reflective of the type of care they received. For example, two people might receive the same evidence-based care and reach the same outcome but their perception of how good the care was will depend on their personal priorities and emotional state. One person might prioritise clinically efficient care while the other might pay less attention to outcome and more to how it is delivered. This variation might affect a service's PREMs. As such, expectation- and goal-setting with a focus on concordance are as important as delivering care. Although there are no standardised, national Commissioning for Quality and Innovation (CQUIN) payment targets for VLUs, some areas might have local VLU CQUIN targets. Keep these in mind, depending on your service area.

Further, the family and friends test — feedback from patients regarding whether they'd recommend the care they had to family and friends — has been rolled out by the NHS across England in acute and community organisations alike. The results of these patient-feedback surveys will be scored and published publicly. Given that this kind of feedback is being taken seriously by a large portion of the NHS, it is also important to include patients and use their experiences and stories as a powerful tool for making the case for service design/redesign.

DATA DRIVE ACTION

Audit is not just about collecting information to measure performance, it is about using data to change and improve practice and sustain quality improvements. Audit results can be incorporated into a business plan (before setup) or feasibility study (when a VLU service is operating), to determine what changes need making, their cost and resource implications, and how they'll be made (Vowden and Vowden, 2011).

Making the case for a VLU service

To gain support for developing a new or existing VLU service, it will be important to prove there is a need using real data. These may be related to patient factors or a failure to meet current targets, and include:

- Low healing rates
- High recurrence rates
- Ulcers remain unhealed for long periods (6 months+)
- Evidence of inequalities of care across the service's localities
- Low patient satisfaction
- Poor level of knowledge among patients about their ulcer and treatment.

Other drivers for service improvement may be related to national policy (eg publication of guidelines with updated recommendations), economics (eg cost-savings within the QIPP agenda) and professional demands (eg competency assessment).

Improving local services can increase clinical efficiency and improve patient outcomes and satisfaction. In Newham, East London, after a service redesign of the existing leg ulcer service, healing rates for leg ulcers at 12 weeks rose from 36% to 72%, and healing at 24 weeks rose from 40% to 100% for 2010. Similarly, recurrence rates were reduced from 20% to 5.8% between April and September 2010 (Dowsett, 2011). When healing rates improve, patients will report more satisfaction. As such, a critical factor for recognising there is room for improvement will be data around healing rates (PROMs) and, increasingly, feedback on patient satisfaction (PREMs).

Making service improvements

To implement change within a service, it is important to set specific goals and to look at how to influence current factors in order to bring about structured change. One way of visualising this is through the use of driver diagrams or structured charts with three or more levels:

1. Goal
2. Primary drivers — high-level factors the VLU service needs to influence
3. Secondary, tertiary, etc, drivers that act upon these factors to achieve the goal.

To develop a driver diagram, it is important to brainstorm which factors need to be addressed to achieve a specific overall goal and explore how these factors are connected. Where possible, the drivers in a driver diagram should be made measurable. In this way, the driver diagram can become a measurement framework for tracking progress towards a goal (see Resource 6).

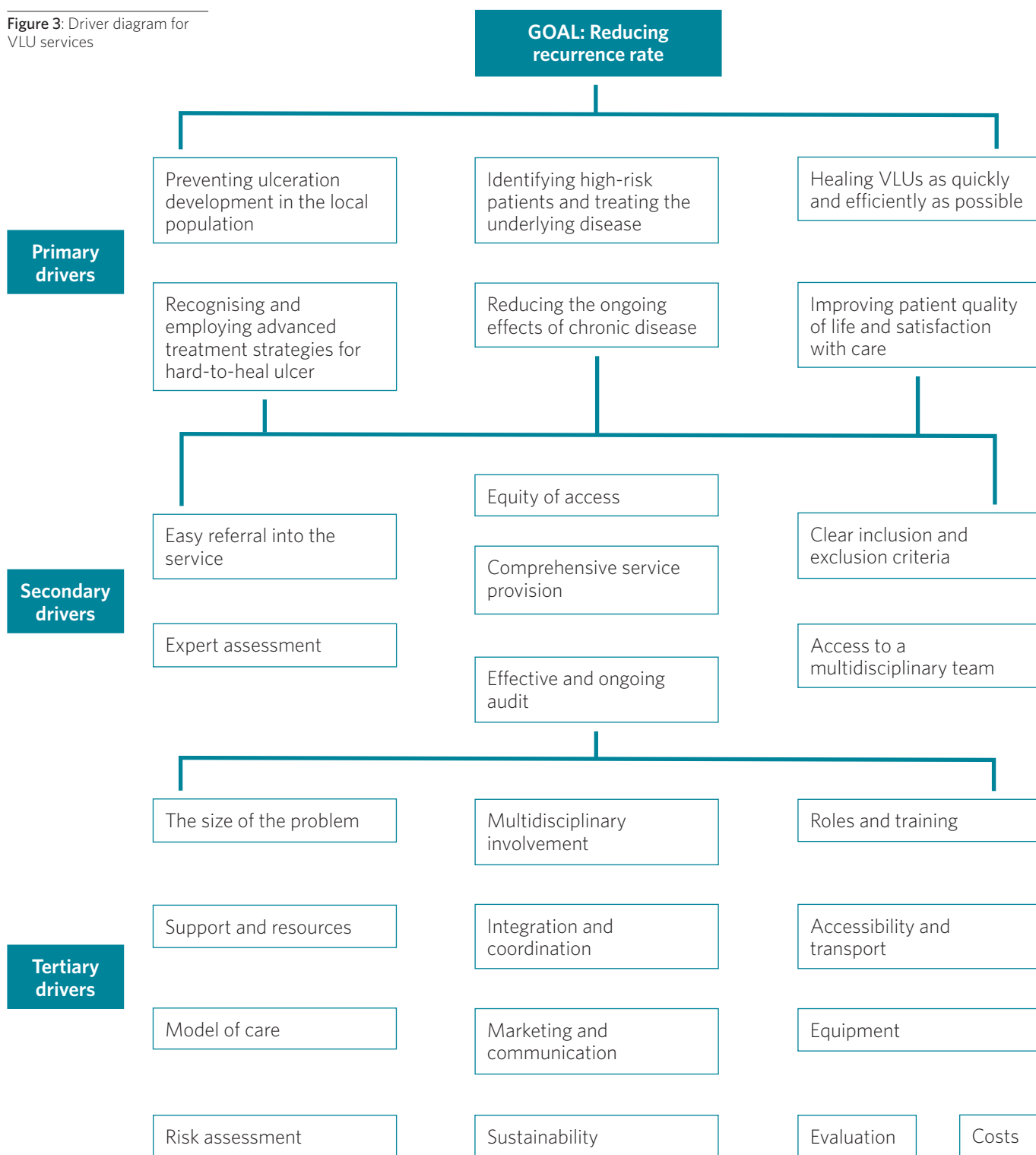
The driver diagram can then be used as a communication tool to explain the strategy for convincing others that service improvement is needed — eg commissioners and the people who support your service (see Figure 3, page 16).

RESOURCE 6: Driver diagrams

Information on driver diagrams:

www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/driver_diagrams.html

Figure 3: Driver diagram for VLU services



A visual representation of the factors — which overlap at each level to influence factors at higher levels — discussed within the consensus document.

Appendix 1. List of equipment

Note: Not all equipment listed here will be available to or appropriate for every VLU service. This appendix is meant to serve as a checklist to consider for inclusion when developing a new or improving an existing VLU service (NHS Supply2Health, 2012).

- Doppler ultrasound machines, 8MHz and 5MHz probes, headphones for noisy environments
- Calculators
- Ultrasound gel
- Other equipment for assessing patency of arterial supply
- Sphygmomanometers and a range of cuff sizes and cuff covers
- Stethoscopes
- Cling film
- Disposable or cleanable tape measures
- Adjustable-height patient seating
- Variable-height couches with head-end that can be raised and lowered
- Pillows with wipeable covers
- Stools for nurses
- Armed and armless chairs in waiting room, to accommodate a variety of body types and ability levels
- Plastic aprons and latex-free gloves
- Storage facilities
- Compression system and interactive dressings
- Cleansing and irrigation solutions
- Tapes and cotton/viscose netting
- Skin care products
- Soap substitutes and other cleansing solutions
- Syringes for irrigation
- Dressing packs and supplementary items
- Buckets and bucket trolleys
- Kneeling pads
- Hand washing sinks and gel containers, paper towels
- Waste disposal bins and bags of appropriate colours
- Sharps containers
- Sluice sink for disposal of dirty water
- Stainless steel dressing trolleys
- Hard-surface wipes, towel roll
- Refreshment facilities
- Disposable bandaging/dressing scissors
- Disposable forceps
- Wound swabs
- Magnified overhead light
- Weighing scales and height measure/calipers to measure patients who cannot stand
- Waiting area with health promotion materials
- Digital camera
- Consent forms
- Digital measurement technology
- Tracing materials
- Thermometer
- Sufficiently robust computer hardware and software for viewing results, entering patient data, storing photographs, etc.
- Secure backup of all patient data
- Moving and handling equipment, eg hoist, slings, PAT slides, leg supports, leg lifters
- Hosiery application aids
- Health promotion materials
- First-aid kit
- Tools to promote good hand hygiene and infection control
- Equipment designed to prevent repetitive-strain injuries

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