

Health, Wellbeing and Local Government Committee

Committee Inquiry into Stroke services in Wales – Written evidence from All Wales Podiatrists Stroke Group

Key messages from the All Wales Podiatrists Stroke Group

Podiatrists are not included within a stroke team

More use must be made of Podiatry & Orthotics in acute and rehabilitation of stroke.

Access to Podiatry in the acute setting & rehabilitation is adhoc across Wales.

Service provision for stroke survivors is varied, both generally and in specific reference to Podiatry

Access to podiatry following in-patient rehabilitation is varied and in need of investment and service development. Early intervention / rehabilitation immediately following stroke would be seen to be more beneficial to the patient but many patients are seen within the community following discharge from hospital.

Patients will not necessarily be treated by Podiatrist with specialist skills in stroke management.

There is seen to be an opportunity at the next Sentinel Stroke Audit towards adding our individual audit tools and identifying the 'need' for Podiatry & Orthotics. In addition, provide an opening to benchmark Wales against England and Northern Ireland

There are no identified training budgets

Aim to deliver the care pathway to a high standard

Far greater use should be made of patient experience as part of the range of measures used to evaluate stroke services.

Summary / Recommendations

A review of existing (if any) Podiatry staffing levels in stroke service provision

To Utilise the newly validated stroke audit tool (Podiatry) to identify gaps in current service and contribute to the next Sentinel Stroke Audit

To provide a service to include skill mix and rotation of Podiatry professionals

Provision of training budgets available to the Podiatry / Orthotic professionals providing stroke services, particularly if they are to achieve the standards in the forthcoming stroke education framework for Wales.

To develop standards of care against the RCP guidelines and outcome measures and deliver the care pathway to a high standard

Provide research opportunities to support evidence base practice reference to Podiatry / orthotics and Stroke

Greater use of patient experience as part of performance management of stroke service provisions

The newly formed All Wales Podiatry & Orthotics Stroke group to take forward service development in stroke patients across Wales working in partnership with the Society of Chiropodists & Podiatrists

Improvements in sharing good practice to be led by NLIAH and the Wales Stroke Alliance.

Written evidence from the 'all wales podiatrists & orthotics stroke action group'

Purpose

This evidence attempts to exemplify and highlight the Podiatrist's role from a patient centered approach¹ working within a dedicated stroke team to improve patients care. Most foot injuries occur while walking and caused by the forces generated during gait². Foot problems may occur in response to long standing and surplus mechanical trauma from ground reaction forces on the foot and footwear during locomotion. These areas exposed to mechanical stress are often in a pattern, which relates to the biomechanics of the foot movement³ this situation is "magnified in the stroke sufferer".

Key messages from the All Wales Podiatrists & Orthotists Stroke Group includes:

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Background

Stroke survivors may experience many complex foot disorders which will impact on their health & well being. A complication such as 'foot drop', which is characteristic of a high stepping slapping gait, and spasticity, high tone, and function / biomechanics of foot, institutes many risk factors for the development of foot problems. In addition possible motor deficiencies, loss of proprioception adds to an unsteady gait and repeated and excessive traumas to the feet go unheeded because of the lack of pain awareness⁴. Collectively, podiatry has an essential role in prevention and the need for ongoing support and correct footwear is vital, as declared by Sandin⁵ seventy -percent of stroke survivors regain the ability to ambulate.

Consequently, foot health promotion, providing information and careful evaluation of the patient's footwear and the benefits of the knowledge of biomechanics and orthotics, which can be manufactured by the podiatrist, is paramount. There is substantial evidence in the literature that an Orthotic device is shown to improve the effectiveness and efficiency of gait for that individual⁶. Moreover, when there is a need for orthopaedic footwear and working with the Orthotist and physiotherapist, our expertise in foot function and footwear is of great importance. In addition the podiatrist's involvement in MDT working and engaging in researching the field of modern rehabilitation known as 'functional electrical stimulation' would also be a role to further benefit our patients gait

Accordingly immobility, insensitivity, pressure plus moisture, infection, incontinence and nutritional deficiency are all additional risk factors for development of skin breakdowns after a stroke⁵.

Many patients will experience an increase in stance on their "unaffected "side and the foot will need to endure more pressure for longer periods. Chronic oedema, abnormal skin, foot and possible toe shape can be observed, in the stroke person and all predispose to tissue damage / pressure sores. Foot function and structure is strongly influential in ulcer formation, particularly in the at 'risk foot'.⁶ CVA and TIA's all render the elderly patient at risk of ulceration and as a result of the ageing process, tissues in the leg and foot are very often not functional or viable. Collectively, with the presence of micro-angiopathy, the blood supply to the foot is reduced which in turn reduces the ability to handle infection⁷.

Local problems such as corn, callous, and lack of fibro fatty padding will accelerate the affects of these conditions and infections may become more severe in the less mobile. In addition, the upkeep of the patient's foot hygiene and possible nail care is a major factor, education and advice to carers and family members is an essential part in the podiatrist's role.

Ongoing foot health and long-term support is necessary in the majority of stroke patients. Improvement in foot health by the podiatrist can have a direct influence on 'tone' and support the physiotherapist in their goal planning.

Many stroke sufferers are unable to self-care and as a result may experience an increase in foot problems, foot pain or gait abnormalities; all may further place the patient at risk of falling⁸ and should be avoided. Falls are common after a stroke, Nyberg cited in Warlow ⁹ reports between 25% and 39% as falling during inpatient rehabilitation. Hence, foot problems / foot pain may exasperate and modify gait pattern to delay discharge from hospital. Evidence from studies by Forister, is cited by Warlow (1996)⁹ demonstrating that 79% of stroke patients following discharge fall in the first 6 months at home and the majority fall more than once. Also, in agreement, evidence by Helford ¹⁰ Tinetti ¹¹ Lord ¹² Menz⁸ state that there is a relationship of falling with foot problems, balance and functional ability. Though it is recommended that sound research evidence is required if the role of Podiatry in falls prevention is to be fully evaluated.¹³

Foot health has a direct impact on the encouragement of an active lifestyle. Moderate exercise can benefit both the quality and duration of life.¹⁴

Personal and domestic activities of daily living (ADL) are tasks, which often place a degree of stress on the balance system¹⁵. Evidence of exercise studies by Lord, is cited by Messier¹⁶ to show that 'balance' improves significantly with exercise. However, exercise is very difficult if a patient has foot problems. Physical activity also contributes to the prevention and management of those patients overweight and helps towards reducing the risk of coronary heart disease.¹⁷ Therefore encouraging exercise, along side continued emphasis on foot health education, prevention of foot problems all aids towards reducing further risk of a stroke. In addition, functional weight bearing

exercises or simple active exercise designed to optimise walking performance, needs to be sustained with 'good foot health' to award the best possible results.

As well as the above, there is a further identified role for the Podiatrist.

Research evidence highlights the need for a podiatrist to engage in the responsibility of "prevention and maintaining tissue viability" in the adult stroke patient.

Evidence based Practice in Prevention and Maintaining Tissue Viability

Atherosclerosis is a marker for systemic vascular disease involving the coronary cerebral and renal arteries leading to an increase risk in myocardial infarction (MI) stroke and death. At present 46% of all deaths in the UK are attributed to cardiovascular disease and of those, a majority are the results of the effects of atherosclerosis.¹⁸ This condition is accompanied by a high likelihood of peripheral arterial disease, a major risk factor for "lower extremity amputation". There is comprehensible evidence of an inter-relationship between symptomatic and asymptomatic peripheral vascular disease (PVD) coronary heart disease (CHD) and stroke. All three of the above conditions all stem from atherosclerosis and commonly occur together¹⁹ At present there is very little that a podiatrist can do to reverse atherosclerosis, thrombosis or emboli, but prevention lies, in "thorough patient" "assessment" with **special emphasis on vascular assessment of the lower limb.**²⁰

In daily practice, the Podiatrist' awareness of the symptoms and diagnosing of PAD is of clinical importance:

As stated by Mant ²¹ patient's who have suffered a stroke remain at an increased risk for further stroke within 5 years. The Podiatrist has the ability to elicit and treat symptoms of Peripheral Arterial Disease associated with functional disability and limb loss, and quality of life. In addition, Intermittent Claudication is often diagnosed by the Podiatrist and referred on further investigation, and evidence shows a link in the incidence of PVD in these patients being two–four times higher than in normal subjects¹⁹

It is known for many years that peripheral vascular insufficiency is one of the major factors contributing to the increase incidence of infection of the lower extremity ²²

The podiatrist could pick up potential problems before they become critical. An estimated £17 million is spent each year treating vascular ulceration. Below the knee amputation and rehabilitation is estimated to cost £40,000¹⁹ per case. **Podiatrists seen within a multidisciplinary adult stroke team can routinely screen patients during their initial assessment generating early recognition, which is crucial and cost saving.** The NSF standard 5¹⁷ states, those individuals at particular risk of stroke should be identified and offered advice and support to make lifestyle changes. Furthermore, high priority should be given to rapid delivery of evidence based secondary prevention, which the Podiatry service can offer

Assessing and monitoring a patient's peripheral, neurological and vascular stasis is a major role for the podiatrist in every day practice, to aid in prevention.

Diabetes is of prime concern to the podiatrist and from the literature; the diabetic is at greater risk to encounter a stroke. All patients with diabetes and PAD receive preventative foot care with regular supervision to minimise the risks of developing foot complications and limb loss²³. This involves screening by measuring the Arterial Brachial Pressure Index (ABPI) in patients at risk by our Specialist Podiatrist. In addition, for the 'at risk' patient, pulse assessment using the Doppler is completed as part of the assessment process by all podiatrists initiating ongoing monitoring and reviews as part of their preventative care for that patient. Furthermore, this documented data, aids the podiatrist to initiate prompt and timely referrals to appropriate vascular specialist, which is critical for this type of patient.

Recent evidence in JAMA 2008 suggests the use of a 'Framingham risk score'²⁴ to identify healthy individuals at high risk of cardiovascular disease, stating that ABPI's will improve the accuracy of cardiovascular risk prediction. Thus, the podiatrist working in joint partnership to help in devising a service model is unmistakable the way forward in the field of perceiving the likelihood of having a vascular event.

Smoking is also known to be an important risk factor for a stroke. Podiatrist's can make patients more aware of the implications of their smoking on the leg and foot. Hence, the podiatrist's need, for ongoing education and prevention is critical.

Patients with a history of atrial fibrillation may be prescribed Warfarin therapy; this is a risk factor for patients who look after their own foot health. Referral to the podiatrist is necessary for a full assessment of the patient's foot health needs whereby yet again self empowerment / education and prevention can be agreed or advice on direct pathway for nail cutting if identified.

Conclusion:

Effective rehabilitation is dependent on the MDT functioning as a team and engagement in collaborative goal planning, focusing on the person and their family. Education and prevention within the team is vital and the podiatric role in stroke prevention can offer,

A regular review of medical history and well-being and refer on when necessary

Neurological and vascular assessment, especially in the diabetic stroke patient

Enhancement, of patient's mobility and maintenance of tissue viability in the lower limb.

A potential reduction in an extrinsic risk factor identified in falling i.e. footwear /slippers. The podiatrist will offer ongoing advice on appropriate footwear together with orthotic devices. In addition, reductions in foot pain / problems that may put them at further risk of falls.

Provide care either within the community clinic once discharged or in the patients own home if housebound.

Continue to give appropriate advice to patient also patients family / carers on lifestyle factors such as regular exercise and no smoking and the individual foot health needs

Stroke research methods and in-house programme for the continuing education of staff in management of stroke

Implement practice guidelines supported by regular audit, to improve the processes of care and clinical outcomes

Develop research & evidence based practice in stroke

Summary / Recommendations

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