



The COLLEGE
of PODIATRY

Podiatry: Driving value, improving outcomes

The vital role of podiatry in keeping our
population active – saving lives and saving limbs

The College of Podiatry would like to thank the following individuals for their input into this report.

- Lawrence Ambrose, The College of Podiatry
- Dr Michael Backhouse, University of Leeds
- Peter Burbidge, Northern Health and Social Care Trust
- Allister Campbell, South Eastern Health and Social Care trust
- Alison Campbell-Smyth, Northern Health and Social Care Trust, Antrim
- Katie Collins, The College of Podiatry
- Dr Sarah Curran, Cardiff Metropolitan University
- Nina Davies, Leeds Community Healthcare NHS Trust
- Debbie Delves, The College of Podiatry
- Martin Fox, Pennine Acute Hospitals NHS Trust
- Tom Kelly, The College of Podiatry
- Dr Joanne McCardle, Salford Royal NHS Foundation Trust
- Liz North, The College of Podiatry
- Stephanie Owen, Queen Elizabeth Hospital Birmingham
- Sara Petela, PB Consulting
- Clare Richards, The College of Podiatry
- Rhiannon Roberts, Podiatry Open Access Service, Aberystwyth
- Prof Anthony Redmond, Leeds Biomedical Research Centre
- Adam Thomas, The College of Podiatry
- Glyn Wallen, The College of Podiatry
- Frank Webb, Derby Community Health NHS FT
- Tom Williams, PB Consulting
- Julie Williams-Nash, The College of Podiatry
- Alison Wishart, The College of Podiatry

With thanks to services which provided case studies, including:

- Bronglais Hospital, Aberystwyth, Hwyl Dda University Health Board
- Cwm Taf University Health Board
- Leeds Community Podiatry Service, Podiatry Service
- Northern Health and Social Care Trust, Antrim
- Pennine Acute Hospitals NHS Trust
- Podiatry Open Access Service, Aberystwyth
- Queen Elizabeth Hospital Birmingham
- Salford Royal Foundation Trust
- Derby Community Health NHS FT
- Community Musculoskeletal Assessment and Treatment Service, NHS Wales

Contents

- 4** Foreword
- 5** Executive Summary
- 9** Tackling the diabetes & vascular epidemic: the role of podiatry
- 17** Improving outcomes in musculoskeletal conditions and rheumatoid arthritis through podiatric interventions
- 22** The role of podiatry in falls prevention
- 28** Conclusion
- 29** References

Foreword

I am extremely proud to be the President of the College of Podiatry. The role of membership organisations representing healthcare professions is absolutely critical to the success of the system and the welfare of those who work tirelessly in our NHS. They engage and inform politicians, like me; commissioners; civil servants and other practitioners. This makes for a better system and more informed politics, which can only be a good thing.

As this timely reports sets out, podiatrists play a significant and utterly necessary role in the system. Indeed, the health and social care sectors are facing untold pressure on their funding, and this is taking its toll on community and public health budgets. But when these provider sectors are not able to meet demand, the acute sector picks up the shortfall, which further worsens the financial positions of each trust.

Podiatrists are a cost-effective solution to many of the issues facing healthcare providers today. The College has identified three areas imposing a huge cost burden on our system and sets out ways in which the better use of podiatrists could relieve the pressure on the health and care system in each of these areas. Unless tackled properly, diabetes and vascular-related complications, rheumatological conditions and falls have the potential to cripple the health service. This is why it is crucial to ensure the appropriate and timely use of podiatry.

I commend this report to you, and I encourage you to read it carefully and consider what you can do to improve policy and make use of dedicated and highly-trained podiatrists to save money and help people to live the best lives they possibly can.



The Lord Kennedy of Southwark
President of the College of Podiatry



Executive Summary

Podiatrists are trained to diagnose, treat, prevent and rehabilitate complications of the feet, ankles and lower limbs. They prevent, manage and correct foot problems, relieve pain, treat infection and keep people of all ages mobile and active. They are the experts in all aspects of foot and lower limb structure, function and health.

Podiatrists are uniquely placed, and have the specialist training, to manage the increasing numbers of people presenting with foot and lower limb complications resulting from long-term conditions including diabetes, peripheral arterial disease, rheumatoid arthritis and musculoskeletal pain. The number of people diagnosed with these long term conditions is set to continue due to the increase in the ageing and obesity demographics.

With podiatry fully integrated into primary care, community, acute and independent care settings, podiatrists are able to manage these patients thereby ensuring prevention of complications from these long-term conditions, and reduces the number of unnecessary referrals made to secondary care. Podiatrists are able to provide patients with specialist support by providing screening, diagnostics and tailored care plans, consequently increasing patient safety and ensuring access to the right care, closer to home.

Podiatrists provide a vital service to thousands of individuals in the UK every day, and work across the life course from childhood right through to elderly and palliative care. In addition to managing complications and co-morbidities of many long-term conditions, podiatrists keep people active and mobile. Podiatrists work at the front line in sports medicine, paediatric care, diabetes, rheumatology, musculoskeletal conditions, peripheral arterial disease, falls



prevention, bone and tendon surgery and essential day to day maintenance of foot health, enabling mobility across the UK.

The ability of podiatrists to make early interventions within the community can reduce A&E attendances and unnecessary hospital admissions by facilitating early detection and intervention of potentially life-threatening conditions.

This report highlights the role that podiatrists play in three areas which each have far-reaching consequences across the health and care system. In each of these areas, podiatrists are often under-utilised, which means an opportunity is being lost to tackle problems before they escalate, costing the system more in staff time and resources, and greatly impacting on the lives of patients and their health outcomes. The potential to improve public health and achieve the prevention agenda through the better

deployment and resourcing of podiatrists is clear and will be highlighted throughout this report.

This report covers three key areas in which podiatrists contribute their expertise and demonstrate their value:

- Diabetes and vascular disease, specifically foot ulceration and amputation prevention, which costs the NHS around £1 billion per year.
- Falls prevention, particularly amongst the elderly, which costs the NHS and social care around £2.3bn every year, and rising.
- Musculoskeletal conditions, which consumes around 5 per cent of the NHS budget.

Research undertaken for this report has found that:

- Early podiatric intervention has the potential to improve mobility and independence in all people who experience foot health problems.
- Despite the strong recommendation from NICE, a Freedom of Information Request (FOI) carried out in 2017 (with a response rate of 87 per cent) found that **29 per cent of CCGs do not commission a foot protection service**, and of those that do, only around **7 per cent are not led by a podiatrist**.
- A further FOI undertaken in 2017 revealed that **33 per cent of Trusts who responded do not operate a dedicated falls prevention team**, and of the 67 per cent that do, **only four per cent include a podiatrist** in that team.¹
- Podiatrists are under-utilised across the health and care system, avoiding critical chances to tackle problems before they escalate.

This report makes recommendations for action in each of these areas, as well as recommendations for government.

Diabetes, Peripheral Arterial Disease (PAD) and foot protection services:

■ Podiatrists should be employed in community-based PAD assessment and triage services within each Trust/Board in order to facilitate early diagnosis and intervention with foot ulceration and severe or critical limb ischaemia, thereby reducing pressure on hospitals and optimising effective treatment of these life-shortening and limb-threatening conditions.

■ In order to reduce regional variation and ensure a higher standard of care and better patient outcomes, there should be greater compliance with NICE and SIGN recommendations that podiatrists should lead foot protection services and that people with suspected PAD be offered a NICE-recommended assessment, including ankle brachial pressure index (ABPI) and access to structured exercise programmes or vascular teams, as needed.

■ The NHS must invest in long-term development of podiatrists with the relevant skills and competencies to deliver diabetic foot care and early diagnosis of PAD. This includes commissioning learning placements and opportunities to undergraduate and postgraduate podiatrists.

Musculoskeletal conditions:

■ Every patient newly diagnosed with rheumatoid arthritis should be referred to podiatry services for a lower limb assessment and tailored care package as required.

■ As the experts in the diagnosis and treatment of MSK conditions in the foot and lower limb, podiatrists play a major

role in relieving pressure on primary and secondary care settings and supporting people to manage their condition so that they can recover faster and stay in work and/or return to work earlier.

■ Women should not be forced to wear high heeled shoes in the workplace as part of a uniform. This requirement should be banned from all workplace policies.

Falls prevention:

■ All falls prevention teams should include a podiatrist, or have access to a podiatrist. This should be reflected in relevant NICE and SIGN guidance.

■ Anyone over the age of 65 who has a fall should have a lower limb assessment carried out by a podiatrist. This should be reflected in relevant NICE and SIGN guidance.

■ Standardised education and signposting must be provided to patients deemed at risk of falling on how to reduce their risk of falling, including information on how they can access podiatry services.

Recommendations for government and the NHS:

■ Government should publicly recognise the unique contribution and role of podiatry in supporting the early intervention and prevention agendas.

■ In order to standardise access to podiatry services across the country, the NHS across the four nations should mandate data collection relating to the commissioning on the podiatry workforce and services.

- Government and the NHS should take action to facilitate a wider implementation of NICE and SIGN guidance.

Best practice is not about reinventing the wheel – it is about accepting an unforeseen shortfall and adopting good ideas. This report sets out the simple measures that could make the difference in three areas that impose a huge cost burden on the NHS across the UK.

“I am delighted to see this timely report. As we set out in the NHS England document, ‘Allied Health Professions into Action’, Allied Health Professionals (AHPs) have a unique contribution to make to the prevention, rehabilitation and return to work agendas.

“I am very proud to represent podiatrists, along with other AHPs. And to promote how podiatrists enable better health for the population and support people to be pain free, active, and remain in work.

“This report sets out recommendations for commissioners and healthcare leaders which can save money and improve outcomes, often simply through the better deployment of existing podiatry services. It is an excellent example of the contribution AHPs can make to system leadership.”

**- Suzanne Rastrick,
Chief Allied Health Professions Officer, NHS England**



Tackling the diabetes & vascular epidemic: the role of podiatry



People with diabetes are around

23

times more likely to have a toe, foot or lower limb amputation than those without diabetes.



The scale of the problem and its significance

Five million people in the UK are at high risk of developing Type 2 diabetes.² The dramatic increase in the number of people with diabetes also means that the number of individuals with diabetes-related complications, such as foot ulcers or lower limb amputations, is also increasing dramatically. Foot ulcers and amputation are associated with high levels of mortality and are linked to peripheral arterial disease (PAD) and neuropathy (nerve damage).

People with diabetes are around 23 times more likely to have a toe, foot or lower limb amputation than those without diabetes.³ The mortality rate of patients with diabetic foot ulcers is worryingly high. Mortality rates for those with diabetic foot ulcers and those who have undergone amputations are greater than for those with breast or prostate cancer, with one study suggesting suggesting mortality rates are as high as 44 per cent within 5 years.⁴



The financial cost of ulceration accounts for £1 in every £140 the NHS spends

It is estimated that around 60,000 to 75,000 people with diabetes in England have a foot ulcer at any given time.⁵ Every week over 135 toe, foot or lower limb amputations are carried out on people with diabetes, but around 80 per cent of these could be prevented⁶. Amputation rates in the devolved nations are equally concerning; for example according to the Scottish Diabetes Survey 2016, 1,705 (0.7 per cent) of those with Type 2 diabetes had a major lower limb amputation.⁷

In addition to the negative impact on quality of life for those with diabetes-related complications, there is a serious financial impact. The financial cost of ulceration and amputation in England was estimated at £972mil to £1.13bn in 2014-15. **This accounts for £1 in every £140 the NHS spends.**⁸ In Wales diabetes accounts for 10 per cent of the annual NHS Wales budget.⁹

The estimated costs associated with a major amputation are not confined to healthcare, but also span social care and welfare as the impact of amputation on an individual's ability to undertake meaningful employment and live a life free from social care is limited. The number of diabetes related amputations in England increased by 16 per cent between 2009-12 and 2012-15¹⁰. This is likely to continue to increase, both in absolute terms and as a proportion of total NHS spending, unless there is a significant increase in early detection of people at risk of diabetic foot ulceration. Diabetes prevalence is also increasing across the UK as a whole; for example, if current trends continue it is

estimated that 300,000 people in Wales will have Diabetes by 2025.¹¹

What should be done?

Effective use of podiatry is crucial to tackling the rise of diabetes-related complications, which devastate lives and use a significant amount of NHS resources. Podiatry is a regulated profession, with a highly trained and skilled workforce with unparalleled experience in delivering care to patients with vascular and diabetic foot problems.

The NICE guideline NG19 recognises this expertise and recommends that '*The foot protection service should be led by a podiatrist with specialist training in diabetic foot problems*'.¹² Podiatrists are uniquely trained to diagnose and treat potentially life-altering foot problems, including soft tissue and bone infections, fractures, dislocations, and diabetic ulcerations. Podiatrists work across care settings thereby facilitating seamless care for patients and ensuring the appropriate flow of patients between community and acute settings.

Utilising podiatry in a community setting to diagnose and triage patients with foot conditions has been demonstrated to reduce pressure on hospitals through interventions in the community and avoid costly unnecessary outpatient referrals. It has also led to the reduction in excessive prescribing of antibiotics by primary care clinicians who do not have specialist training in diabetic foot conditions, a key priority for governments. This further supports the objective of the

NHS in promoting improved health through education and providing care closer to home for patients.

Despite the strong recommendation from NICE, a Freedom of Information Request carried out in 2017 (with a response rate of 87 per cent) found that **29 per cent of CCGs do not commission a foot protection service**, and of those that do, around **7 per cent are not led by a podiatrist**. A greater effort must be made to ensure that all CCGs adhere to this guidance, which is designed to support the reduction in regional variation in foot care delivery and outcomes.

NICE recommends that all Trusts/Boards have a multidisciplinary footcare service in order to provide intensive and co-ordinated services for the aggressive treatment of patients with diabetic foot problems, including those with foot infections, ischaemia (poor circulation) and severe deformity. The Diabetic Foot Clinic at King's College Hospital is a centre of excellence which enables this patient cohort rapid access to specialised expertise. The team includes diabetologists, podiatrists, nurses, orthotists, physiotherapists, dermatologists, radiologists and orthopaedic, plastic and vascular surgeons who work closely together, within the focus of an outpatient Diabetic Foot Clinic. Despite this, **almost a third of hospital sites are not compliant** with this recommendation and do not have a multidisciplinary footcare service.¹³ This must be corrected given the evidence which shows that these services can treat patients successfully and reduce major amputation in patients.¹⁴

The 2016 National Diabetes Footcare Audit revealed **that just 62 per cent of CCGs provide training for routine diabetic foot examinations**.¹⁵ Without regular training of practitioners involved in the delivery of diabetic footcare, consistent standards in delivery of care will not be achieved across the UK. The recent diabetes transformation funding, which prioritises diabetes education, recognises the vital importance of this, however this education should not rely on small pockets of funding on an irregular basis in order to achieve long-lasting change.



29%
of CCGs
do not
commission
a foot protection
service



62%
of CCGs
provide training
for routine
diabetic foot
examination

Case Study: **Salford lower limb vascular assessment and triage service** **Salford Royal Foundation Trust**

Background: Before this service was commissioned, people in Salford with lower limb vascular concerns had to travel to Central Manchester Foundation Trust for an assessment from the vascular surgery team. The vast majority did not need surgery and were discharged to primary care. GPs were paying a secondary care outpatient tariff for patients who did not need a secondary care service.

Objective: Reducing hospital referrals for lower limb vascular conditions by providing podiatry-led assessments in the community. This supports the vision of the Five Year Forward View in providing care closer to home.

How the service was established: A business case was developed to provide assessment and support for patients with symptomatic PAD for 2 hours a week over a 3-month period. This funded a full-time Band 7 podiatrist and a 0.5 whole time equivalent Band 2 administration assistant. The podiatrist's work plan included seven clinical sessions seeing a total of 21 patients, two training sessions and one admin session per week.

The service was given an estimated time to implement of 4-12 months.

How the service runs: The assessment service operates in a local health centre to make it accessible to the local population, and clinics are run five days a week with some

evening and Saturday slots. Referrals are made by GPs using Choose and Book, and may also come from the general podiatry and tissue viability service. Patients receive a patient information leaflet explaining about the service and what to expect from the appointment.

Each patient has a full non-invasive vascular assessment, which takes around 45 minutes. After the assessment a tailored management plan is agreed, including recommendations to GPs for drug therapy, and referrals to smoking cessation and structured exercise therapy as necessary. The podiatrist can also refer patients directly to vascular surgery if appropriate.

What has the impact been?

Savings delivered: Net annual savings of £62,700 in 2015/16 for a population of 239,000 were made; equivalent to £26,200 per 100,000 people.

The savings were from avoiding 489 unnecessary outpatient referrals (281 vascular services, 208 diabetic foot screenings) costing £234 each. The running cost of the service is £51,733, which funds a Band 7 podiatrist independent prescriber and a part-time Band 2 administrative assistant.

Quality outcomes delivered: The patient experience improves significantly because care is given quicker and closer to home. There is also evidence that safety is improved due to faster diagnosis of life-threatening conditions in a small number of cases, including suspected aneurysms.



Net annual savings of
£62,700
in 2015/16

Case Study:
High Risk Foot Protection Team
Whitworth and Buxton Diabetes Clinic

Objective: To move the treatment of complex diabetic foot cases closer to the community, to prevent unnecessary bed days, and to provide individual care whilst reducing pressure on hospitals.

How the service was established: Historically, complex diabetic foot patients were seen at Stepping Hill Hospital in Stockport – 21 miles away. A High Risk Foot Protection Team was established and led by the podiatric surgery team which specialises in treating complex patients.

How the service runs: The service can appropriately assess, diagnose and treat complex diabetic foot complications in a community setting and in a timely manner to reduce the need for a costly referral to the acute sector. The clinic is able to treat soft tissue and bone infections, fractures, dislocations, and diabetic ulcerations. It uses the vast experience of the podiatric surgery team to treat day cases swiftly and effectively.

Patients can access the service through attendance at minor injuries or through their GP surgery. Referrals come from GPs, community podiatrists, diabetes specialist nurses and consultants at Chesterfield Royal Hospital.

What has the impact been?

The service has been extremely successful, both in patient satisfaction and cost savings. An astonishing 98 per cent of respondents said they would be ‘extremely likely’ to recommend the service to family and friends.

In a study period between 2015 and 2017, the service has treated around 88 new patients each year, each often requiring numerous follow-up treatments.

The service has avoided about 38 admissions to hospital each year through immediate treatment. This was achieved in some cases through the expert packing of ulcers with locally administered antibiotics, often enabling the early discontinuation of systemic antibiotics. In other cases, patients were treated for bone infections which, if admitted, would often have involved a period in hospital on IV antibiotics. Some patients were treated for cellulitis in the foot and leg which would, upon admission, have also often resulted in IV antibiotics.



The service has avoided about **38** admissions to hospital each year through immediate treatment

Case Study:

Podiatry Open Access Service Bronglais Hospital, Aberystwyth

Objective: To address the needs of patients with an emergency foot problem in a community setting to reduce unnecessary A&E attendance.

How the service was established: This open access service began as a once weekly clinic for patients to attend in an emergency situation, for example those presenting with a new foot ulcer, cellulitis, or a foot infection. It was soon established that many patients who attended A&E with similar problems did not always receive the most appropriate treatment in this setting.

How the service runs: The clinics are run from the outpatients department within the acute trust, with referrals accepted from primary care or self-referrals. The emergency open access clinic is not designed to provide general podiatry treatment, but deals with emergency cases which, if not treated, would escalate to require hospital admission. The purpose and scope of the clinic is communicated to GP surgeries and patients so that correct referrals are made.

Typical presentations are chilblains, in-growing toenails, new ulcerations, osteomyelitis, necrosis and sometimes Charcot neuroarthropathy. GPs refer complicated patients to this clinic for guidance on treatment plans, vascular assessments, off-loading, and tissue viability.

The open access clinic is open three days a week, but this is set to be increased to four. Currently weekend cover is not provided.

What has the impact been?

Occasionally, patients will need to be admitted for treatment for sepsis, but overall, most patients are kept within the community setting, reducing the pressure and financial burden on hospitals. This service has now been adopted throughout the Health Board at all main hospital sites.

A recent case was seen in open access where a patient presented with a very painful foot following a period of increased exercise. He had a diabetic foot ulcer, and the symptoms may have been mis-diagnosed as cellulitis or an infection. Ordinarily, the patient would have been admitted for intravenous antibiotics or offered home intravenous antibiotics with the acute response team. Due to the medical history of the patient, it soon transpired that this was not an acute cellulitis, but a suspected Charcot neuroarthropathy. The patient was quickly given an air boot and referred for an urgent MRI scan. The patient was assessed by an experienced podiatrist who works very closely with the endocrinology consultant. An appropriate management plan was discussed with both the consultant and the patient, which prevented the need for this patient to attend A&E.

An A&E visit, admission and two treatments for a patient believed to have an infection would have cost around £5,600. This cost was avoided, as was the cost of misdiagnosis, which would have led to a worsened condition and greater cost of treatment.

£5,600
per patient cost avoided



Case Study:
Manchester Leg Circulation Service
Pennine Acute Hospitals NHS Trust

Background: Podiatrists, Nurses and Doctors in Manchester were regularly tackling the consequences of late diagnosis and under-management of PAD, resulting in avoidable amputations and vascular related deaths. This situation existed in parallel to the issue of high numbers of inappropriate or unnecessary referrals of people with suspected PAD to hospital vascular teams. Many of these referrals did not need to be seen by the Vascular Team. Resources that could be best used on people with severe or deteriorating arterial disease were being wasted.

Objective: A radical change in the traditional PAD paradigm was needed and early identification, detection and management of PAD therefore was deemed essential in Manchester and was the main reason why this community service redesign was commissioned.

The Manchester Leg Circulation Service was first commissioned in 2009 under the clinical leadership of Consultant Podiatrist Louise Stuart MBE, to help address these key limb and life threatening problems in the local population. The service has since redesigned itself to meet the NICE Guidance on PAD (GC 147) and the subsequent NICE Quality Standard (QS 52).

How the service runs: At the heart of the service redesign is the Integrated Care Pathway for PAD, which has been developed using best evidence and with consultation involving all local vascular stakeholders, including Podiatrists, Nurses, Surgeons, managers and commissioners. It has been published in Podiatry and Nursing journals and included in regional and national PAD-related documents as an example of best practice.

Education sessions were delivered to all key stakeholders on identifying PAD better and an integrated care pathway was developed to improve patient safety and ensure seamless care delivery between organisations.

The two vascular-trained clinicians (vascular podiatrist and vascular nurse specialist) carry mobile vascular diagnostic equipment and provide specialist assessment, clinical diagnosis / exclusion of PAD and facilitate treatment options, ranging from; discussing diagnosis and prognosis, prescribing cardiovascular medicines, referring patients to supervised exercise programmes, support with quitting smoking / losing weight and timely vascular surgeon appointments for those who need one.

What has the impact been?

This service model demonstrates an improvement in earlier identification of PAD and that 80 per cent of people with PAD can now be managed successfully in the community. By ensuring that only the appropriate severity of PAD is referred on for surgical opinion, vascular out-patient clinics now have more capacity to see their urgent patients in a timely way. With an overall 30 per cent referral cost saving, it has created a 'win – win' situation for all key stakeholders involved.

In the first three years, over 2000 people had been referred by the service with suspected PAD and more than 700 of them then had a PAD diagnosis confirmed and have since been optimally managed, mostly under the care of their GP. Additionally, by introducing a 30 second abdominal aorta pulse check, the Leg Circulation Service identified fifteen patients who had undiagnosed abdominal aortic aneurysms, with three of those patients requiring urgent surgical repair and the remaining twelve being placed on our Trust's surveillance programme. This simple, lifesaving early detection initiative has resulted in a Nursing Times Award (2015).

NICE (2012), the All-Party Parliamentary Group for PAD (2014) and the recent STAMP (STop AMPutations) initiative by NHS England (2015) on critical limb ischaemia, have all recognised and endorsed the Leg Circulation Service's service model and Integrated Care Pathway, linking it to the Clinical Guideline and Report launches, as an example of best practice.

Recommendations for action

Podiatrists should be employed in community-based PAD assessment and triage services within each Trust/Board in order to facilitate early diagnosis and intervention with PAD and critical limb ischaemia, thereby reducing pressure on hospitals and optimising effective treatment of these life and limb-threatening issues.

In order to reduce regional variation and ensure a higher standards of care and better patient outcomes, there should be greater compliance with NICE and SIGN recommendations that podiatrists should lead foot protection services and that people with suspected PAD be offered a NICE-recommended assessment, including ankle brachial pressure index (ABPI) and access to structured exercise programmes or vascular teams, as needed.

The NHS must invest in long-term development of podiatrists with the relevant skills and competencies to deliver diabetic foot care and early diagnosis of PAD. This includes commissioning learning placements and opportunities to undergraduate and postgraduate podiatrists.

Improving outcomes in musculoskeletal conditions and rheumatoid arthritis through podiatric interventions



The scale of the problem and its significance

Every day in the UK over 21 per cent of the population consult a GP about musculoskeletal (MSK) pain.¹⁶ The impact of rheumatoid arthritis (RA) on both quality of life and the functioning of health services across the UK is considerable. A European study found that the impact of RA on quality of life is severe, having almost the lowest quality of life score of the chronic diseases.¹⁷ The economic cost of sick leave and disability-related benefits relating to RA alone is £1.8bn.¹⁹

The total cost of treating a patient with RA every single year is estimated to be around £16,500 in the UK.²⁰ European estimates suggested the cost of treating the 400,000 people in the UK with RA is around €6.6bn every single year, or £6bn.²¹ **This represents around 1 in every 20 pounds spent in the NHS every single year.**

RA places a huge burden on the health service; and effective management of it at an early stage is

**The economic cost
of sick leave and
disability-related
benefits relating
to rheumatoid
arthritis alone is**

£1.8bn



The financial cost of treating patients with rheumatoid arthritis is equivalent to £1 in every £20 the NHS spends each year

absolutely critical. Around 90 per cent of people with RA were found to have a foot pathology,²² and around 56 per cent of RA patients will experience foot pain at some time during their disease,²³ but a 2004 report found that only 40 per cent had access to foot care services.²⁴ A study at Rochdale Infirmary found that the majority of patients attending the rheumatology outpatient department had footwear unsuitable for use by somebody with rheumatoid arthritis.²⁵

As the experts in the diagnosis and treatment of MSK conditions in the foot and lower limb, podiatrists play a major role in relieving pressure on primary and secondary care settings and supporting people to manage their condition so that they can recover faster and stay in work and/or return to work earlier.²⁶

What should be done?

All of the available research suggests treatment of RA and other musculoskeletal conditions should begin as soon as possible to delay the progress of the disease, including through the use of disease-modifying anti-rheumatic drugs (DMARDs) if appropriate, but the cost of drugs in the treatment of rheumatoid arthritis makes up only 7 per cent of the total medical spend.²⁷ Management and monitoring forms the vast majority of RA treatment costs.

Podiatrists are a crucial part of the treatment of those with RA. A 2007 study from the USA showed that after nurses and doctors,

podiatrists were the medical professionals most often seen by patients with RA.²⁸ They are absolutely critical in the treatment of rheumatoid complications, and service providers in the UK should recognise that significance.

The appropriate application of podiatry treatment in the care pathway can demonstrably have excellent implications for the prognosis of RA patients. A study of the use of foot orthoses by those with RA found that, 'after 30 months, the intervention had the greatest clinical effect on foot disability. Foot pain was reduced by 19.1 per cent'.²⁹ A study by Marike van der Leeden further showed that if people with RA do not get insoles early, they have worse outcomes.³⁰

NICE clinical guideline [CG79] on 'Rheumatoid arthritis in adults: management' reflects this, recommending that 'All people with RA and foot problems should have access to a podiatrist for assessment and periodic review of their foot health needs'.³¹ It goes on to state that 'Functional insoles and therapeutic footwear should be available for all people with RA if indicated'.³² SIGN guidance also recommends that all people with rheumatoid arthritis should have access to foot health services.³³ Despite this, only half of all rheumatology departments report basic foot care services for their patients and less than 1 in 10 have formal care pathways or mechanisms for referral to foot health services.³⁴ A further UK study on the prevalence, impact and care of foot problems in people with RA, published in

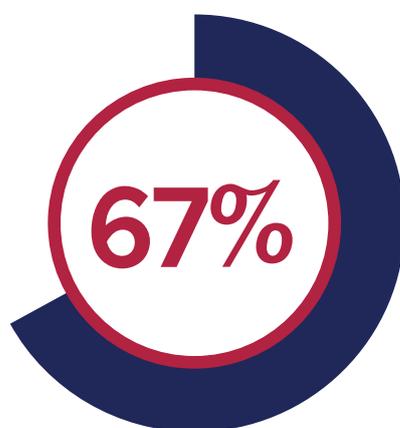
October 2017, found that the provision of effective, timely and targeted care remains a pressing need.³⁵

It is crucial to ensure that CCGs/Trusts/Boards adopt the recommendations within NICE and SIGN guidance in order to ensure that all patients, no matter where they live in the UK, receive the same standard of care. It is also important that healthcare commissioners interpret 'periodic review' in the appropriate way to prevent the unnecessary escalation of a condition or related problems. In this case it is important that patients with RA should have an annual assessment by a podiatrist to ensure rheumatic foot health problems do not escalate.

The wider use of podiatric assessment and treatment at an early stage of treatment would improve the patient's prospects of

returning to work and would go some way to reducing the £1.8bn economic cost of absence from work due to RA, as well as dramatically improving quality of life. However, **only around 67 per cent of those reporting rheumatic foot pain in a wide-ranging study had ever seen a podiatrist, and only 61 per cent had been prescribed insoles.**³⁶ If services were fully compliant with NICE guidance CG79³⁷, this number would be substantially higher.

Where potential problems arise, early access to podiatry services is crucial, as trained podiatrists are best able to recognise and appropriately refer disease flare and arthritic complications. Podiatrists are also best placed to assess and monitor peripheral vascular and neurological diseases, which have been shown to save money by avoiding unnecessary referrals to Acute Vascular Units when lower limb pain arises.³⁸



**of those reporting
rheumatic foot pain in a
wide-ranging study had
never seen a podiatrist**

Case Study: **Community Musculoskeletal Assessment and Treatment Service (CMATS), NHS Wales**

Background: In May 2012 the Welsh Government Orthopaedic Innovation and Delivery Board advised the introduction of a Clinical Musculoskeletal Assessment and Treatment Service (CMATS) in all health boards across Wales. The service was developed to provide a “single point of access” from primary care referring into secondary care for musculoskeletal conditions. Whilst the underlying principles of the service are not new having been established in England for 10+ years, it demonstrates the introduction of interface musculoskeletal clinics and services, and mirrors national musculoskeletal pathways that are supported by the NHS Wales National Orthopaedic Delivery Framework. Examples are provided here from two NHS Wales University Health Boards (UHB) – Hywel Dda and Cwm Taf.

Objective: Focused on improving patient access and streamlining care for patients with musculoskeletal conditions through specialist musculoskeletal assessment, advice and management, a reduction in waiting times for consultant specialists and improved conversion rates for surgery. CMATS can refer on to all secondary care specialists including orthopaedics, rheumatology, neurosurgery and pain services.

How the service was established: CMATS is a multidisciplinary team that consists of advanced physiotherapists and podiatrists with specialised skills in the area of MSK, clinical specialist nurses, and administrator coordinators. The team has the ability to order investigations such as x-rays, Magnetic Resonance Imaging (MRIs) and taking bloods, as well as undertaking injection therapy. The team is also supported by pain management programs, and lifestyle services that include the management of obesity. During the early phases of the service, all GP practices were contacted and face-to-face presentations on the function of CMATS were given, along with

information on the referral process sent to all GPs and practice managers.

How the service runs: The service runs with all GP practices able to refer patients, along with referrals from primary care physiotherapy, podiatry, secondary care orthopaedic/rheumatology consultants and, accident and emergency to CMATS for triage (stage 1). A face-to-face CMATS assessment, diagnostic and management appointment is provided with option of referral to secondary referral if required (i.e. rheumatology, orthopaedics) (stage 2). In addition, the CMATS team can also refer patients into pathways such as the National Exercise Referral Scheme and services based on core therapy.

What has the impact been?

All referrals are triaged within 5 days with all patients seen within an 8 week target. A snapshot of database information from each university health board is provided below:

Hywel Dda UHB: Of the face-to-face contacts at CMATS podiatry clinics only 17 per cent of patients were referred to orthopaedics, with 47 per cent followed-up with core podiatry, and 19 per cent at CMATS podiatry. From all of CMATS data, 65 per cent of the 73 per cent of patients referred from CMATS to orthopaedics were listed for surgery. This shows a high conversion rate and suggests appropriate referral behaviour by the CMATS team. It is also noted that 43 per cent of patients were triaged off secondary care pain lists and transferred onto CMATS without the need for consultant input. Prior to the introduction of CMATS orthopaedic waiting lists had been steadily increasing, a trend which has now reversed.

Cwm Taf UHB: In 2016-2017, 47 per cent of patients were redirected away from orthopaedic service with 46 per cent

requiring face-to-face contact by the CMATS team (n = 4344 out of n = 9423). From face-to-face appointments, 7 per cent of patients were referred for secondary orthopaedic care, whilst 35 per cent were referred on to core therapy services. 56 per cent of patients were provided with advice and discharged. The audit conversion rates to surgery from CMATS face-to-face contact is 76 per cent.

Service user experience shows a 94 per cent good-excellent satisfaction with 88 per cent of patients stating they are happy to be assessed by an advanced clinician. An online survey for GPs also showed that 54.55 per cent of GPs were satisfied and 27.27 per cent were very satisfied.



All referrals are triaged within
5 days
with all patients seen within an
8 week
target

Recommendations

Every patient newly diagnosed with rheumatoid arthritis should be referred to podiatry services for early examination as well as podiatric and orthotic treatment as required.

Patients with rheumatoid arthritis should have an annual assessment by a podiatrist to ensure rheumatic foot health problems do not escalate.

A joined up approach to MSK supports individuals to adopt lifestyle changes, which can support the management and treatment of their condition. This supports patient wellbeing and relieves pressure on secondary care services, such as radiology and surgery.

The role of podiatry in falls prevention



Hospital Episode Statistics data show that falls accounted for 438,009 admissions to hospital in 2014-15 in England, an increase of 3.8 per cent from 2013-14 (421,848)

The scale of the problem and its significance

Falls can cause serious harm and injury, including bruises, hip fractures, or head traumas.³⁹ Falls and subsequent fragility fractures are associated with substantial disability, pain, reduced quality of life and even death. Falls can impair the ability to live independently and can result in admission to hospital, and premature admissions to residential care. Half of those who sustain a hip fracture never regain their former level of function and one in five dies within three months.

Falls are common following a stroke. The likelihood of having a fall significantly increases after the first fall.

Public Health Wales found that about a third of all people aged over 65 fall each year, with higher rates among those over 75.⁴⁰ Hospital Episode Statistics data show that falls accounted for 438,009 admissions to hospital in 2014-15 in England, an increase of 3.8 per cent from 2013-

14 (421,848).⁴¹ Patients aged 65 or over accounted for the majority of admissions for falls at 64.5 per cent.

Evidence shows that podiatric intervention improves balance in older adults. Treatment can improve function during gait if pain is reduced, exercise programmes can improve strength and flexibility, and appropriate footwear fitted with orthotic devices can provide external support and improved function.

The cost of falls to the NHS is huge. An individual hip fracture can result in hospital admission costs of £5,744 per patient and an ambulance callout of £230.⁴² It is estimated that the cost of falls to the NHS is £2.3 billion a year and there are also significant costs for social care services.⁴³ Preventing falls, therefore, would not only reduce a financial burden for healthcare services, but would indisputably improve the lives of those who would otherwise suffer serious complications from one or more falls.

What should be done?

Falls are not an inevitable consequence of old age. Many falls and fractures can be prevented by well organised services and organisations working in partnership. Podiatrists play a crucial role in fall prevention; including promoting foot health, patient education, health promotion, rehabilitation and mobility.⁴⁴ This includes assessing and reducing disabling foot pain and the fear of walking, helping to increase mobility and range of motion of the foot, falls screening and footwear and self-care advice.

Foot pathology and inappropriate footwear have been shown to increase an individual's risk of falls. It is essential that patients identified as being at high risk for falling, or with a history of falls, undergo an assessment of their foot

Figure 1: The fall cycle



**An individual hip fracture
can result in hospital
admission costs of**

£5,744

**per patient and an
ambulance callout of**

£230



A UK study found that a multifaceted podiatric intervention programme was associated with a **36% reduction in the rate of falls in community dwelling older people with disabling foot pain**

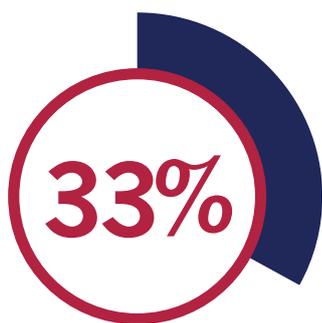
conditions and footwear and that appropriate measures are taken to address these factors.⁴⁵ A study found that in one cohort of patients admitted to hospital, 86 per cent of inpatients wore footwear that was likely to increase their risk of falls.⁴⁶

The NICE pathway ‘Falls in older people overview’ specifies the patient journey in both the acute setting (preventing falls during a hospital stay for those aged 50-64 deemed high risk of falling and for the over 65s) and the community setting (preventing falls in the community for over 65s).⁴⁷ Podiatrists are equipped to play a key role in falls prevention in both the community and acute settings. The National Service Framework for Older People have called for health improvement plans to reduce this burden⁴⁸ and NICE suggests screening all patients over 65 years for falls risk.⁴⁹ Healthcare providers should facilitate an assessment carried out by a podiatrist for anyone over the age of 65 who has had a fall.

A challenge faced by the podiatry profession is the lack of data collected by Trusts on the input and impact of podiatry in the delivery of various services, which is often used as a justification for the lack of investment in podiatry expertise. However, a study of ‘Podiatry involvement in multidisciplinary falls prevention clinics’ from Australia found that all clinic managers considered podiatry to be important in falls prevention.⁵⁰ This is supported by a UK study which found that a multifaceted podiatric intervention programme was associated with a 36 per cent reduction in the rate of falls in community dwelling older people with disabling foot pain.⁵¹ Given the significant costs associated with a fall, it is evident that falls prevention is a key area where savings can be made and patient outcomes can be improved.

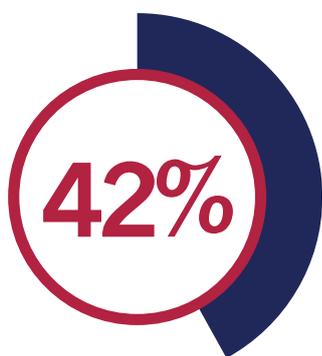
In addition to treating foot conditions podiatrists have a key role in education and advice on inappropriate footwear which can contribute to poor balance and an increased risk of falling.⁵² Education and signposting on how to reduce falls risks for patients are critical, particularly for patients deemed at high risk of falling. This should include information on how they can access podiatry services within the community. A scheme to exchange ill-fitting slippers helped to reduce falls among older people by 60 per cent.⁵³

Despite the proven benefits of podiatry in falls prevention, a series of Freedom of Information requests undertaken in 2017 revealed the low proportion of areas operating dedicated falls prevention teams.



England:
33 per cent of Trusts said they do not operate a dedicated falls prevention team. Of those that do, only four per cent include a podiatrist.

It is unacceptable to have such a variation in access to podiatry expertise and care within falls prevention teams. All falls prevention teams should include a podiatrist, or at the very least have access to a podiatrist. This should be reflected in all NICE, SIGN and other relevant guidance and be adopted by healthcare providers across the UK.



Scotland:
42 per cent of Trusts which responded said they do not operate falls prevention teams, and of the seven Trusts that do, only one has a team including a podiatrist.



Wales:
25 per cent of Boards do not operate falls prevention teams, and only two out of the five which do include a podiatrist.



Northern Ireland:
25 per cent of Trusts responding said they do operate a dedicated falls prevention team, but none of those teams include a podiatrist.

Case Study:
Leeds Community Healthcare NHS Trust

What was the objective: To provide goal based, podiatric care to children in their local community.

How was the service established? Leeds' Paediatric Podiatry Service was established over 15 years ago, to meet the demand and complexities of the care required for children. The number of children living in Leeds was 139,024 in the 2011 census which is 18.5 per cent of the total population of 751,485. The service is led by a clinical lead, specialising in paediatrics and staffed by podiatrists with a special interest in paediatrics.

How does the service run? The service provides assessment for children up to the age of 18. Children can access the service through a health care professional or as a self-referral. Referrals are made for a variety of reasons including pain, being unable to take part in sport and developmental concerns associated with structure and function.

The service can appropriately assess and provide measurable, goal based care. The clinics are involved in the treatment of painful and functional concerns associated with, for example, tarsal coalitions, juvenile idiopathic arthritis and musculoskeletal pain. Other presentations are complicated, with movement and or behavioural issues such as developmental coordination disorder or delay, genetic anomalies, those on the autistic spectrum and sensory processing disorders.

What has the impact been?

The service measures the outcome of care based on the World Health Organisation's International Classification of Function and Disability and focuses on a child's level of impairment, ability to perform activities, participation and well-being. The outcomes establish that podiatry is able to help children with a range of health challenges. For the majority of children, the service is able to help independent of other services and for a wide range of presentations.

The outcome measure domains reflect that children's lower limb presentations are not homogeneous in that not all can be improved and some may maintain whilst some may deteriorate independent of intervention.

The service is able to improve 71 per cent of children's impairments and activities and maintain 21 per cent; this aspect includes management of structure, body function and pain. The service is able to improve children's participation levels by 50 per cent and maintain 43 per cent; this includes them attending school, taking part in family activities and playing sports. The service is able to help improve 65 per cent of children's well-being and maintain 21 per cent; this includes distress levels, embarrassment of a condition and parental or family worry.

The service works closely with the multidisciplinary team to help achieve improved outcomes for the approximate 10 per cent of children who are challenged in particular domains. This includes the support of occupational therapists, paediatricians, child and adolescent mental health service, orthopaedics, rheumatology and pain teams.

**The service is able to improve
71% of children's
impairments**

Case Study;
Awareness Raising - Sloppy Slipper
Exchange Event
Northern Health and Social Care Trust
(NHSCT), Northern Ireland

What problem was identified? Between April 1st 2010-March 31st 2011, 2883 people attended an A&E department within the NHSCT due to a fall. Within the same time period, 740 people over the age of 65 were admitted to hospital as in-patients with a fracture. Of those fractures, 431 were fractured necks of femurs. Currently it is estimated, that within one year of surgery, for repair of a fractured neck of femur, a quarter of people will die. A hip fracture is all too often the final destination of a 30-year journey fuelled by decreasing bone strength and increasing falls risks.

What was the set objective? Sloppy slipper exchanges are not a new idea. Health Trusts and councils all over the UK have held many previous events differing in size and design, but all with a common goal; to remove sloppy slippers from people at risk of falling, and replace them with a safe secure fitted pair. The event also aimed to increase people's awareness of falls risk factors, and provide advice regarding simple actions that can be taken to help prevent falls and improve bone health.

What action was taken? The event was attended by over 200 people. The running time of the event was from 10am – 2pm, with the first eager attendants arriving at 9.25pm. Evaluation of the event was carried out following the event through face-to-face and telephone interviews.

What has the impact been?

- 83 per cent of those people who accepted the slippers felt that they were safer and more secure than the slippers that they had been wearing.
- Of the 54 people contacted, just two per cent had experienced a fall since the event, although the faller stated that slippers were not a contributing factor to the fall.
- 71 per cent of people said that they felt more confident mobilising in their home and 67 per cent reported a reduced fear of falling in their home.
- 100 per cent of respondents, even those who did not like and do not wear the slippers, indicated that they are now more aware of the dangers of inadequate footwear as a result of the event.

71% of people said that they felt more confident mobilising in their home

Recommendation for action

All falls prevention teams should include a podiatrist, or have access to a podiatrist. This should be reflected in relevant NICE and SIGN guidance.

Anyone over the age of 65 who has a fall should have a foot check carried out by a

podiatrist. This should be reflected in relevant NICE and SIGN guidance.

Education and signposting must be provided to patients deemed at risk of falling on how to reduce their risk of falling, including information on how they can access podiatry services within the community.

Conclusion



In the course of producing this report, the College of Podiatry has spoken to those working in services in all four nations that make up the United Kingdom. The value of podiatry is evident across the length and breadth of the country, and the common strengths across national boundaries and commissioning systems are clear for all to see.

This report demonstrates the unique contribution podiatrists make in three areas posing a threat to the financial standing of our National Health Service. But podiatrists do not simply work in our single-payer system – they also fill gaps in our social care services and relieve the pressure on local authorities. The work they do, whether funded by the individual, local authority, health board or NHS commissioners prevents unnecessary admissions, improves quality of life, and provides a service encompassing routine clinical vigilance.

There is only so much that can be achieved through efficiency savings. Commissioners must now look outside the box and carefully consider how to make use of resources outside the conventional and general hospital-based care.

Podiatrists work seamlessly across the health and social care system and provide interventions in the community to prevent conditions from escalating and becoming a greater cost burden on the system.

This report makes a number of practical and achievable recommendations about how those with potential or current foot conditions can be supported to achieve better health and outcomes. **In not making better use of their existing resources, healthcare leaders are missing an opportunity to save money, improve patient outcomes around saving limbs, lives and keeping people active, as well as making our health and social care system ready for the challenges of the coming decades.**

References

- 1 See Appendix – Data Collection.
- 2 State of the Nation 2016: Time to take control of diabetes, Diabetes UK, pg.5. Also: <https://www.diabetes.org.uk/professionals/position-statements-reports/statistics>
- 3 “Diabetic Foot Care in England: An Economic Study”, Marion Kerr, Insight Health Economics, January 2017.
- 4 Ibid.
- 5 Ibid.
- 6 Armstrong DG, Wrobel J, Robbin JM. Guest editorial: Are diabetes-related wounds and amputations worse than cancer? *International Wound Journal*. 2007; 4(4):286-287
- 7 Scottish Diabetes Survey 2016, NHS Scotland, 2016. Link: <http://www.diabetesinscotland.org.uk/Publications/Scottish%20Diabetes%20Survey%202016.pdf>
- 8 Kerr, M., 2017.
- 9 Diabetes in Wales, Diabetes UK. Link: https://www.diabetes.org.uk/in_your_area/wales/diabetes-in-wales
- 10 Kerr, M., 2017, p. 27.
- 11 Diabetes in Wales, Diabetes UK. Link: https://www.diabetes.org.uk/in_your_area/wales/diabetes-in-wales
- 12 “NICE guideline NG19, Diabetic foot problems: prevention and management”, National Institute for Health and Care Excellence, January 2016.
- 13 Kerr, M., 2017, p.26.
- 14 “The benefits of working together in diabetic foot care for the vulnerable patient”, Michael Edmonds, State of the Art Lecture, 2015, pg.33.
- 15 “National Diabetes Foot Care Audit Report 2014-2016”, NHS Digital, 7 March 2017, pg.20. Link: http://www.hqip.org.uk/public/cms/253/625/19/731/NDFA_2017_Report_PPT_Format_Final%20to%20HQIP.pdf?realName=vbKPm8.pdf&v=0
- 16 Arthritis Research UK. National Primary Care Centre, Keele University (2009), Musculoskeletal Matters.
- 17 “The Burden of Rheumatoid Arthritis and Access to Treatment: health burden and costs.”, Lundkvist, J., Kastang, F., Kobelt, G., *The European Journal of Health Economics*, vol. 8, 2008, p. S51, Link: <https://www.jstor.org/stable/pdf/27823145.pdf>.
- 18 Ibid, p. S50.
- 19 “NHS ‘Takes Too Long to Diagnose and Treat Rheumatoid Arthritis.’” Mayor, Susan., *British Medical Journal*, vol. 339, no. 7713, 2009, p. 126., Link: www.jstor.org/stable/25672109.
- 20 Lundkvist, J., Kastang, F., Kobelt, G., 2008, p. S55.
- 21 Ibid, p. S57.
- 22 “The foot in chronic arthritis: a continuing problem”. Kerry MR, Holt GM, Stockley I., *Foot* 1994; 4: 201–3.
- 23 “Foot pain in rheumatoid arthritis prevalence, risk factors and management: an epidemiological study”, Simon Otter et al., *Clinical Rheumatology*, 2009, p 261.
- 24 “Meeting the challenge for foot health in rheumatic diseases.” Williams, A.E. and A.P. Bowden., *Foot*, 2004. 14(3): pp. 154-158.
- 25 “Meeting the challenge for foot health in rheumatic diseases.” Williams, A.E. and A.P. Bowden., *Foot*, 2004. 14(3): p. 155.

- 26 'Changes in ankle range of motion and muscle strength in habitual wearers of high-heeled shoes', Kim et al., PubMed, 2013. Link: <https://www.ncbi.nlm.nih.gov/pubmed/23520300>
- 27 Lundkvist, J., Kastang, F., Kobelt, G., 2008, p. S57.
- 28 "The Complexity of Care for Patients with Rheumatoid Arthritis: Metrics for Better Understanding Chronic Disease Care, Kahn, Katherine L., et al. Medical Care, vol. 45, no. 1, 2007, pp. 55–65., Link: www.jstor.org/stable/40221375.
- 29 "A randomized controlled trial of foot orthoses in rheumatoid arthritis.", James Woodburn, Sharon Barker and Philip S Helliwell, The Journal of Rheumatology, vol. 29, no. 7, 2002, p. 1381.
- 30 Prevalence and course of forefoot impairments and walking disability in the first eight years of rheumatoid arthritis, Marike van der Leeden et al., PubMed, 2008.
- 31 Rheumatoid arthritis in adults: management, NICE clinical guidance [CG79], December 2015. Link: <https://www.nice.org.uk/guidance/cg79/chapter/Recommendations>
- 32 Ibid.
- 33 Scottish Intercollegiate Guidelines Network (2011) Management of early rheumatoid arthritis, A national clinical guideline. Link: <http://www.sign.ac.uk/pdf/sign123.pdf>
- 34 "Provision of foot health services in the UK", Redmond et al., Rheumatology (Oxford, England), 2006.
- 35 "Prevalence, impact and care of foot problems in people with rheumatoid arthritis: results from a United Kingdom based cross-sectional survey", Wilson et al., Journal of Foot and Ankle Research, October 2017. Link: <https://jfootankleres.biomedcentral.com/articles/10.1186/s13047-017-0229-y>
- 36 "Foot pain in rheumatoid arthritis prevalence, risk factors and management: an epidemiological study", Simon Otter et al., Clinical Rheumatology, 2009, p 262.
- 37 Rheumatoid arthritis in adults: management, NICE Clinical guideline [CG79], February 2009.
- 38 "A PAD service led by nurses and podiatrists", Martin Fox, Nursing Times, 26th October 2012, 108: 44, 18-20. Link: <https://www.nursingtimes.net/clinical-archive/cardiology/a-pad-service-led-by-nurses-and-podiatrists/5051070.article>
- 39 "Falls factsheet", World Health Organisation, September 2016. Link: <http://www.who.int/mediacentre/factsheets/fs344/en/>
- 40 Falls Prevention, Public Health Wales. Link: <http://www.wales.nhs.uk/sitesplus/888/page/83453>
- 41 <http://content.digital.nhs.uk/catalogue/PUB19124/hosp-epis-stat-admi-summ-rep-2014-15-rep.pdf>
- 42 "Falls: assessment and prevention of falls in older people", NICE Costing Statement, June 2013, pg.7. Link: <https://www.nice.org.uk/guidance/cg161/resources/costing-statement-190029853>
- 43 "Falls in older people: assessing risk and prevention", NICE Clinical guideline [CG161], June 2013.
- 44 "The role of the podiatrist in falls prevention", Olga Frankowski, December 2010. Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3032153/>
- 45 Foot Pathology and Inappropriate Footwear as Risk Factors for Falls in a Subacute Aged-Care Hospital Rebecca L. Jessup, MPH, BPod, Original Articles, 2007.
- 46 Ibid.
- 47 "Falls in older people review", NICE pathway, NICE, 2014, pg.2. Link: <https://pathways.nice.org.uk/pathways/preventing-falls-in-older-people/preventing-falls-in-older-people-overview.pdf>
- 48 Department of Health (DH). National Service Framework for Older People. London: DH; 2001
- 49 NICE Guidance in Falls "The assessment and prevention of falls in older people" Clinical Guideline 21, Nov 2004. and Clinical Guideline 161 June 2013. Link: www.nice.org.uk/CG161NICEguideline
- 50 "Podiatry involvement in multidisciplinary falls prevention clinics in Australia", Menz HB, Hill KD, Journal of the American Podiatric Medical Association, 2007.

- 51 “Effectiveness of a multifaceted podiatry intervention to prevent falls in community dwelling older people with disabling foot pain: randomised controlled trial”, Spink, Menz, Fotoohabadi, Wee, Landorf, Hill, Lord, British Medical Journal, Volume 343, July 2011.
- 52 Hatton AL, Rome K, Dixon J, Martin DJ, McKeon PO. Footwear interventions: a review of their sensorimotor and mechanical effects on balance performance and gait in older adults. *J Am Podiatr Med Assoc* 2013;103:516–33. 10.7547/1030516.
- 53 See ‘CASE STUDY: Awareness Raising – Sloppy Slipper Exchange Event.



The COLLEGE of PODIATRY

The College of Podiatry
Quartz House
207 Providence Square
Mill Street
London SE1 2EW

Tel: 020 7234 8620
Email: reception@scpod.org

Published: December 2017
Last updated: January 2018