

Orthotic Service in the NHS: Improving Service Provision

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Executive Summary

Orthotic service provision has the potential to achieve significant health, quality of life and economic benefits for the NHS if a comprehensive, integrated service can be provided, throughout the patient pathway.

Current estimates of the number of users of orthotic services are in excess of 1.2 million patients and include diabetic, stroke, orthopaedic & neuromuscular conditions – in line with the Government's health priorities. Patients rely on their orthoses to enable them to continue to work and live independently.

In 2005, the expenditure on orthotic service provision was in the region of £85million. Demand on the service is increasing in line with both the ageing population and the complexity of the associated clinical conditions. There is currently no agreed mechanism for relating the changes in funding to the changes in demand.

Orthotic services have generally received a very low priority in the NHS, hidden in secondary healthcare. A series of reports has been published over the years highlighting the lack of funding and accountability as the service does not affect key performance targets.

This study assesses the service provision of orthotics in NHS trusts. The analysis draws on a review of the policy literature, and a survey of 6 trusts involved in the 2004 Pathfinder project which highlighted that for every £1 spent on orthotic services the NHS saves £4. With current expenditure on orthotic service provision estimated at £100 million this represents a saving of £400 million to the NHS.

Enhanced service levels which had been achieved at pilot sites were generally unsustainable due to inadequate funding. Hospitals were only able to implement many of the recommendations when specific funding from their PCTs was agreed. Furthermore, through increased awareness, the latent demand for the service was revealed.

Current procurement practice is too dependent upon a 'commodity product procurement' model. A locally commissioned service based on clinical outcome is required for improved patient care & real value to the NHS – in line with Darzi recommendations.

Early orthotic intervention improves lives and saves money.

Section 1: Introduction

The provision of orthotic services¹ does not attract as much public attention as other clinical areas such as cardiovascular services and cancer care. Nevertheless, to individual patients the correct supply and fitting of orthotic devices can be a major factor in the management of their condition or the prevention of future problems. The technology of orthoses can appear deceptively simple, such as foot insoles or orthoses made for back problems but the selection and fitting of the most appropriate device requires detailed knowledge of the functioning of the musculo-skeletal system. Many orthotic devices have to be fitted specifically for the individual patient. Delivery of a service of this kind can only be carried out by those with a proper professional training in orthotics and a broad experience of the range of products available. Because of the close link between selection of the appropriate orthosis and a successful clinical outcome, the companies supplying orthotic devices have traditionally been more directly involved in patient service provision than is customary in other clinical areas.

Orthotists in the NHS work closely with several clinical specialties, including orthopaedics, diabetes care, stroke, rheumatology and elderly medicine but the service has never achieved a high profile within hospital trusts. This is partly because information on the extent and importance of orthotic services is not readily available. An estimated £220 million per annum is spent by the NHS on assistive technologies which include orthotics, audiology, community equipment, electronic assistive technology, telecare and prosthetics. The Foundation for Assistive Technology's recent report states that there are approximately 1,200,000 orthotic users in England. However, the number reported may only be used as a guide, as the report suggests that the total number of patients benefiting from such assistive technologies is unknown. This lack of accurate information does not reflect on the work of those in orthotic departments, who often have to cope with inadequate space and limited fixed budgets, irrespective of the number of patients that they treat. What it does suggest is that insufficient attention has been given to the service by NHS commissioners and managers at local, regional and national levels².

Current procurement policies in the NHS divide the supply of orthotic products from the provision of professional orthotic services. Targeting of these services for cost reduction is taking place without full appreciation of the benefits of an integrated overall service structure. This report summarizes the results of a review undertaken, with the assistance of the British Healthcare Trades Association (BHTA), to identify the best policies for orthotic service development and to provide supporting information and analysis in the communication of those policies. The following sections cover a review of recent policy initiatives and reports; the results of a survey of orthotics departments; illustrative case studies showing how orthotic services can deliver significant health benefits to patients and help to meet some of the DoH's main policy targets.

¹ An external device used to support or modify the structural and functional characteristics of weak or ineffective joints or muscles." Available at: Medlineplus.gov

² Down K, Assistive Technology Workforce Development. The Foundation for Assistive Technology. June 2007.

Section 2: Review of NHS Policy Landscape

2.1 The NHS Policy Landscape

A review of the literature was carried out to identify and retrieve relevant publications on orthotic service policy, published since 2000. Eight studies were found on orthotic service provision in England and Scotland.

2.1.1 Policy Recommendations from Studies Retrieved:

Audit Commission 2000, 2002, and 2004

The Audit Commission provided guidance to primary care trusts (PCTs) in England on the commissioning of orthotic services as part of wider strategies to support independence, focusing on the older and disabled population. Recommendations included increased levels of service provision, better access to services, and collaboration among the multidisciplinary teams.

NHS PASA Orthotic Pathfinder 2004

The Pathfinder project made 10 recommendations that were believed to be essential to modernising the delivery of NHS orthotic services:

- Improved clinic facilities with at least two clinic rooms;
- Improved administration and IT support;
- Adequate stock in the clinic;
- Support staff in the clinic acting as orthotic assistants;
- Triage of patients by an orthotist;
- Delegation of care by orthotists to other health professionals where appropriate;
- Universal review appointments in the orthotic clinic and report back to referring clinicians;
- Condition-specific direct GP access;
- Improved communication with clinicians and management;
- Restructured budgets to meet patient demand.

The impact of these recommendations was tested at a series of pilot sites with some success as long as project funds were available.

Scottish Orthotic Services Review 2005

Before this report, orthotic services across Scotland had been described as fragmented, disorganised, uncoordinated and poorly managed. Weaknesses identified included the need for proper coordination of multidisciplinary teams and the participation of local stakeholder groups in the review and redesign of the local services. Similar recommendations to those in the Pathfinder Report and Audit Commission Guidance were made regarding service

provision, improved administration and communication among clinicians and managers and the need to include orthotic services in performance measurement indicators. The Scottish Executive Health Department, the National Centre for Training and Education in Prosthetics and Orthotics and NHS Education for Scotland were recommended to work with the British Association of Prosthetists and Orthotists to consider training and development pathways.

West Midlands Regional Orthotic Project. 2007

This project was designed to develop orthotic services in one region of the English NHS, along the lines proposed in the Pathfinder report. The key recommendations were aimed at commissioners, orthotic service managers and contracted service providers in order to improve service delivery. The report also recommended collaboration between commissioners and senior management in providing trusts. Similarly, there was a need for more coordination between management levels within providing trusts, from the orthotic service manager upwards. Six key factors central to the achievement of change were identified:

- Clear service specifications;
- Valuing health care professionals;
- Companies acting responsibly;
- A clinical evidence base;
- Cost savings from appropriate provision to fund further developments;
- Whole system change to gain maximum benefit from orthotic services.

2.1.2 Clinical Practice and Guidelines

North East Orthotic Consortium Good Practice Document, 2004

This practice guideline provided detailed recommendations on service delivery and organisation, including the specification of orthoses and the timeline for their delivery.

NHS QIS: The Road to Recovery, 2007

In June 2005, the NHS Quality Improvement Scotland Practice Development Unit set up a process of engaging with Allied Health Professionals (AHPs), including orthotists, to identify clinical improvement priorities within specific topic areas, with stroke being one of the key topics. Further recommendations regarding multidisciplinary work, referral and assessment, communication and follow-up of the service were provided.

2.1.3 Discussion

There has been no shortage of reviews of orthotic service provision in the NHS. Projects initiated by the National Audit Office since 2000 have assessed the service and its commissioning practice, while a recent initiative has been commissioned by the Local Specialist Commissioning Groups in West Midlands, aimed at improving care for West

Midland Rehabilitation Centre patients with Orthotics needs. In 2004 the NHS Purchasing and Supply Authority (PASA) commissioned a study into ways of enhancing and developing orthotics services in the NHS. The output of that study, known as the "Pathfinder Report"³, demonstrated a clear and attainable opportunity, not only for patients, but also for the NHS and social care services to achieve significant benefits if the use of orthotic care was appropriately implemented. A recently published report on the West Midlands Project (WMP) draws similar conclusions to the Pathfinder project although with more emphasis on generating stronger evidence base of the use of orthotics.

Most of the documents reviewed support the provision of better resourced and more integrated orthotics services. They also show how such services can assist in the achievement of major policy objectives of the NHS, including reducing referral to treatment times; developing stroke care services; facilitating choice for people with long term conditions; and providing seamless health care with service provision by those best placed to meet patient needs. Orthotic services can play an important role in meeting the NHS objective of keeping people mobile and independent and therefore reducing the need for acute treatment or social care services. In spite of the agreement on the potential of orthotic services, a clear strategy to develop the services to achieve these benefits has not been forthcoming.

The WMP drew on the experience of 28 centres and made use of the published literature on orthotics. The report stresses the need for structural changes focusing on appropriate commissioning of the service followed by lower level re-organisation of responsibilities between senior trust managers and orthotic managers. Improved communications between clinicians and orthotists would benefit patients and improve provision of the service. The West Midlands report highlighted the need to implement changes at all organisational levels so as to accrue the benefits of improving the service at each stage of the patient pathway:

- Changes within the orthotic clinic which would allow improved efficiency;
- Changes outside the clinic such as introducing direct referrals from GPs for an agreed set of conditions;
- Changes outside the acute trust, such as relocating elements of the service to primary care;
- Appropriate commissioning of services for clear service specification
- Better contract management to avoid poor service delivery.

If orthotists are equipped with the right tools, the service is likely to achieve cost savings from prescription of the right orthosis. Economic and health benefits could be generated from more appropriate referrals to the orthotic service.

A six month review post-Pathfinder suggested that the structural, organisational and budgeting pressures present prior to the project had re-appeared once the project funds were used up, halting much of the improvement made³. Three years on, stakeholders participating in the West Midlands project reported similar problems mentioned at the time of

³ Boxer P and Flynn T. July 2004. Orthotic Pathfinder: A patient focused strategy and proven implementation plan to improve and expand access to orthotic care services and transform the quality of care delivered.

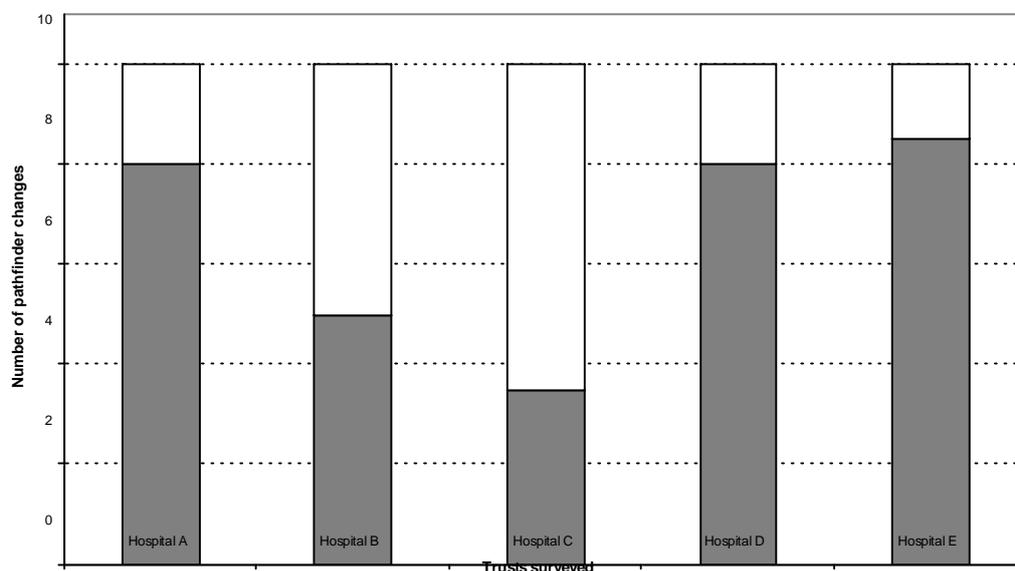
the Pathfinder study i.e. lack of awareness about the benefits of orthotic intervention; long referral pathways, long waiting times and financial issues. The budgetary changes advocated by the WMP⁴ are similar to those proposed by Boxer and Flynn.

2.2 Survey Of Pathfinder Pilot Trusts

In order to confirm the view that little progress had been made since 2000 in capitalising on the many reports on orthotic services, we conducted a survey of trusts involved in the Pathfinder pilot studies. A questionnaire was designed focusing on key recommendations in the report to determine how many of the improvements facilitated by the Pathfinder pilot had been maintained.

Out of six trusts contacted, five responded to the questionnaire and were followed up with a series of interviews, face-to-face or by telephone, to give a better understanding of the situation. Figure 2.1 summarises the results obtained in terms of maintenance of Pathfinder pilot changes. A first striking response from three hospitals was that the service level achieved during the pilot was no longer sustainable owing to lack of required funding. Furthermore it was pointed out that any benefits from the pilot, in terms of cost savings resulting from fewer referrals to other departments, did not generate an increase in funding to the orthotic service.

Figure 2.1: Survey results: Maintenance of Pathfinder recommended changes
Responses from hospitals



Shaded area: Total number of recommendations in place at 5 of the trusts surveyed; e.g. hospital A reports that 8 out of 10 recommendations made by the Pathfinder project are currently in place, while 2 recommendations have not been maintained.

⁴Gillies J. West Midlands Regional Orthotics Project. November 2007. URL: http://www.southbirminghampct.nhs.uk/_services/rehab/documents/LSCGreport.doc. (Accessed October 2008)

Even though Hospital A and E managed to secure appropriate funding to implement the changes to the service, increased awareness had led to an increase in demand which simply resulted in longer waiting lists. There were no incentives to their trusts to reduce the waiting time for orthotics, as patients referred to the orthotic clinic have already been seen by a clinician and their treatment is deemed to have started. This means that they are not in breach of the Department of Health target of a maximum of 18 weeks from referral to treatment. Currently both hospitals are in negotiation with their respective PCTs to increase funding. This finding draws attention to one of the WMP recommendations, i.e the need for appropriate commissioning of the service. If episodes of orthotic care were defined, independently of other clinical specialisms, the need to reduce waiting times would be more clearly on the management agenda. If these episodes of orthotic care attracted a specific tariff payment under the payment by results system, then resources could be channelled into the service as demand increased.

2.2.1 Likely impact of Orthotics in clinical areas

Orthotic services cover a wide range of clinical areas where it is likely to provide health benefits, some of which are listed below as reported by the trusts:

- Orthopaedics – pre & post operative joint support
- Rheumatoid arthritis and osteoarthritis – pain relief from custom bracing and footwear
- Stroke – improving independence
- Elderly medicine – improving mobility
- Diabetes – reducing ulceration rates
- Sports injuries – joint rehabilitation
- Cerebral palsy – contracture prevention
- Polio limb dysfunction - improve independence & mobility
- Trauma – post op bracing
- Vascular complications – pressure relief
- Other muscular-skeletal complications such as knee instability, broken back or neck, ankle replacements – support & pain relief during rehabilitation
- Foot deformities such as forefoot varus, hyper mobile feet, metatarsalgia and drop foot - biomechanical alignment for pain relief and prevention of deterioration of associated joints

Several of these areas especially, cardiovascular disease, diabetes and elderly medicine require significant long term care and hence consume a significant amount of the NHS budget. With increasing obesity levels and the ageing population, clinical areas such as diabetes, stroke and elderly medicine are of concern for health policy.

- The increase in the elderly population in the UK appears to be gradual as compared to other European countries. Nonetheless, with increasing life expectancy, it is projected that the percentage of those aged 65 and over will be 23.2% by 2031, increasing from 13.2% in 1971⁵ which will affect services provided in the NHS.

In 2000, it was estimated that people aged 65 and over use almost two thirds of general and acute hospital beds⁶, accounting for nearly 40% of the NHS budget in 1998/99, while social services spent 50% of its budget on that age group.

Extrapolating to 2009 without adjusting for further increases in the elderly population, this would suggest the NHS now spends nearly £35 billion of its budget on elderly care.

- Another cause for concern is the continuing rise in obesity in the UK. Projections for England estimate that 36% of males and 28% of females are likely to be obese by 2015. Furthermore, this percentage is expected to increase to 47% and 35% for males and females respectively by 2025. In addition, by 2021, the proportion of overweight adult men will be equal to the proportion of obese men, i.e. approximately 43%⁷.

The risk of developing several chronic diseases increases substantially with the increase in obesity. For instance, the risk of developing type 2 diabetes increases by 20 to 80 times, while coronary heart disease also increases not only as the weight increases, but also with the incidence of diabetes by 2 to 3 times⁷.

McPherson K and colleagues estimated that the future annual health service costs of diabetes, coronary heart disease and stroke with increase in BMI from 2007 – 2050 can reach up to £3.50bn, £6.10bn and £5.50bn respectively⁷.

Appropriate management of patients with diabetes, cardiovascular complications or arthritis problems can delay the need for more expensive and complex treatment and the need for social care as well as improving mobility and independence. Following one of the recommendations of the West Midlands project, expanding the evidence base in these areas is likely to demonstrate the health benefits of using the service which would be accrued with adequate funding.

⁵ Tomassini C. Demographic data needs for an ageing population. Population and Demography Division. Office for National Statistics. Dec 2004. URL: <http://www.statistics.gov.uk/CCI/article.asp?ID=1321&Pos=&ColRank=1&Rank=224>. (Accessed October 2008).

⁶ Department of Health. The NHS Plan. The Government's response to the Royal Commission on long term care. July 2000. URL: http://www.dh.gov.uk/dr_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4082154.pdf. Accessed October 2008.

⁷ McPherson K, Marsh T and Brown M. Tackling obesity: Future choices – Modelling future trends in obesity & their impact on health. 2nd Edition. Government Office of Science. URL: <http://www.foresight.gov.uk/obesity/14.pdf>. (Accessed October 2008).

2.2.2 Impact of Darzi review of Orthotics service provision

The recently published NHS review by Lord Darzi stressed the need for improved quality of services and increased patient choice; the need to generate an evidence base for best practice and to monitor health outcomes. Four aspects of the review can be related directly to orthotic services:

- Personalising services focusing on patient's needs;
- Measures of safety and clinical outcomes with systematic measurement of quality of care;
- Patient access to clinically and cost-effective interventions;
- Developing best practice tariffs focused on areas for improvements.

It is encouraging for the service to note that the review recognises the need to provide personalised care for patients with chronic diseases, as the provision of orthotics in the NHS focuses on provision of bespoke service to its patients. As described earlier, the use of orthotic services can reduce the burden of several chronic diseases which have significant impact on the NHS budget. The need to further gather evidence based on clinical outcomes will only strengthen the case of increased patient benefits. Demonstrating significant patient benefit as well as cost-effectiveness of interventions is likely to improve the case for appropriate commissioning of the service. With the growing influence of regulatory bodies such as the National Institute for Health and Clinical Excellence (NICE), the need to adopt cost effective technologies is increasingly recognised among Trusts in England and Wales. Furthermore, the Darzi review encourages the need to develop tariffs for areas requiring improvements. The implementation of health-related group (HRG) codes for orthotics would focus attention on the activity of the service and funding for the service would be clearly defined.

2.2.3 Case Studies

Included in Appendix 1 are 3 case studies highlighting the positive impact that orthotic provision has on the quality of patients lives and on the health economy.

The studies are examples of primary, acute and long term conditions. The orthotic service has a dramatic impact on patients' lives

"I know the complications diabetic patients can have with their feet. Since I have been wearing diabetic footwear I have the confidence to be more active. I do a lot of walking and have lost a considerable amount of weight (4 stones). Generally my health has improved"

Section 3: Summary and Recommendations

Both the Pathfinder project and the West Midlands project draw similar conclusions by firstly recognising the value of an integrated service with the level of care determined by professional orthotists. Secondly, they both agree that for the benefits of the service to be accrued, whole system changes must be implemented, specifically structural budgetary changes. The West Midlands project advocates clear service specifications from service commissioners based on agreed pathways of care designed by professional staff. In addition, the need for clinical evidence base to demonstrate the benefits of the service would be a driver for increased investment in the service.

This project investigated the provision of the service by reviewing the NHS policy landscape and surveying the impact of recent policy documents. Several studies have documented the weaknesses in current orthotic service organisation, yet no major initiative has been undertaken within the NHS to improve the situation.

Companies supplying orthoses to the NHS have traditionally been involved in the provision of qualified staff (orthotists) to provide the service within NHS hospitals. They are involved in the provision of training for orthotists regarding the prescription & fitting of specific products and this gives them unrivalled knowledge of the service which should not be overlooked in the search for short term cost savings from service tendering exercises. Patients and professionals benefit from the availability of a full range of products, especially when care is very specific to the individual.

We would propose a series of recommendations:-

- A new model of service that recognises that orthotic products are not commodities but individually prescribed solutions tailored to patient needs.
- Prescribers referring into orthotic services should request a treatment objective and expected treatment outcome.
- The profile of orthotics should be raised with commissioners, local and national management.
- Commissioning for orthotic services should be overseen by a national body with a clear understanding of the service.
- Patients should be allowed real choice in where they access the service.
- Funding should follow the patient
- Services should be measured on outputs/outcomes rather than inputs

Orthotics provision has the potential to achieve significant health, quality of life and economic benefits for the NHS if a comprehensive, integrated service can be provided, throughout the patient pathway. Service planning and contracting arrangements which emphasise the delivery of an integrated and comprehensive orthotic service are more likely to achieve the benefits to the NHS identified in the many reports.

Section 4: Appendices

4.1 Case Studies

The case studies presented below indicate the scale of the potential benefits to patients, the NHS and society in general from the appropriate use of orthotic care. Because the importance of orthotic services has not been fully appreciated few robust trials have been commissioned in the area. Better evidence is now emerging from cohort studies and service audits which will help to establish the general benefits of orthotics beyond individual cases.

4.1.1 Case Study 1 - Acute Orthotic Intervention

Orthotic Intervention for Ruptured Tendo - Achilles

To date there are many published articles regarding the benefits of surgical repair of a ruptured achilles tendon versus conservative treatment i.e. treatment in plaster casts or an orthosis.

Figures have been published that as many as 28.8% re-ruptured in the conservatively managed group compared with 1.7% in the surgically managed group (Moller et al Journal of Sports Injury Medicine 2002). More realistically the University of Sweden reported that conservatively treated re-rupture rates were between 10 – 15 % and surgically repaired were between 5 – 8 % (Wallace R.G. Journal of Bone and Joint Surgery 2004).

This kind of data suggests that there was no structured protocol, treatment plan or orthosis specifically designed plan for this type of injury. Therefore it is not surprising that surgeons would offer patients a surgical repair rather than treat conservatively.

In 2002 the a Cast Replacement Orthosis was introduced for trial into a District General Hospital. This orthosis is designed for the treatment of injuries of the lower leg and foot. It incorporates a self-adapting vacuum cushion (bean bag) in conjunction with a rigid shell which provides cast-like stabilisation. The use of adapters allows for different settings of fixation or range-of-motion. The device is specifically designed for the aftercare of both conservatively and surgically repaired ruptured achilles tendons..

To date the Orthotic Department has treated over 190 patients with the Cast Replacement Orthosis and have long term outcomes data on 131 of those patients. Previous to the introduction of the Cast Replacement Orthosis, all of these patients would have been considered for surgery. The majority would have undergone surgery of prolonged treatment using Plaster of Paris.

Of the 131 who have completed their treatment, 90 were treated orthotically and 41 surgically. The decision on the treatment pathway was made by the Orthopaedic Consultant. The patients were followed up for a period of 12 months following rupture.

Results

N = 131

Re-rupture rate

Conservative	90	3%
Surgical	41	3%

Cost of treatment		Follow-up	Total
Conservatively	£165	6 – 8 @ £15.00	£270
Surgically	£1,970	3 @ £75.00	£2,195

Conservative treatment costs are calculated as the cost of the orthosis and 45 mins fitting time at a notional £60 per hour and follow up appoints (15 mins) at £60 per hour.

Costing

The outcome shows, with a structured orthotic protocol (including follow up appointments) the re-rupture rates reduced to 3% and whether the patient is treated conservatively or surgically the outcome is the same. The patients were followed up for a period of 12 months following rupture. The time to full mobility was not measured.

Conclusion

From the financial point of view it is a cost effective method of treatment which is a fraction of the cost of a surgical episode of care (12% of surgical cost).

There are additional benefits:-

- Reduced risks associated with surgery (infection etc)
- Reduced hospital waiting lists (surgery)
- Reduced bed blocking
- Less disruption to patients life (caused by operative procedure)

References:

Acute Achilles Tendon Rupture – Minimally Invasive Surgery versus nonoperative treatment with immediate full weight bearing – a randomised controlled trial - Roderick Metz, MD†,*, Egbert-Jan M. M. Verleisdonk, MD, PhD†, Geert J.-M.-G. van der Heijden, MD, PhD‡, Geert-Jan Clevers, MD, PhD§, Erik R. Hammacher, MD, PhD||, Michiel H. J. Verhofstad, MD, PhD¶, and Christiaan van der Werken, MD, PhD† *The American Journal of Sports Medicine*.

4.1.2 Case Study 2 – Chronic Orthotic Intervention

Orthotic intervention for the diabetic foot

The example below shows the potential for significant benefit from the appropriate use of orthotic services for patients with diabetes. The patient data come from a cohort study in an NHS Trust.(Nuttall et al 2008).

Background

It is well documented within the EU that between 30-44% of high risk patients will have further foot pathologies (mainly ulceration and amputation). (Tennvall G R et al 2000, Maciejewski M L 2004, Boulton A J M 2005).

Studies show, that high risk patients without prescribed footwear will develop ulcers and the cost of healing one ulcer is £3000-£7500 as published by the International Diabetic Foot 2005. Should this progress to an amputation the cost is estimated to be around £65,000. (IDF 2005)

Typical Patient: The patient is male and currently 57 years old. He was diagnosed as diabetic 12 years ago. He has been insulin dependent for the past 9 years and has the following diabetic complications:-

Neuropathy

Significant forefoot deformities

No history of previous ulceration

This patient has been screened to be at high risk and was referred to the orthotic department at a District General Hospital.

Orthotic Treatment

The patient was assessed and initially supplied with two pairs of modular footwear (his deformities could be accommodated within this type of footwear) and with total contact insoles.

He attended the orthotic review clinic, which consisted of careful monitoring in the first three months (weaning process) and was called to the two year review clinic.

At the first review clinic his feet remained intact and this was the case for the following eight years. He has been able to maintain part time employment.

Costing

The average cost per patient for this type of care was estimated to be £501 in a sample of 103 patients. (Nuttall et al 2008) over a two year period.. This is less than £300 per year, a fraction of the cost of an amputation, and far less than the cost of treating a single foot ulcer.

Conclusion

As illustrated by our patient example, this treatment offers the following benefits:-

- Reduced risk of ulceration
- Increased mobility for the patient
- Higher quality of life for the patient
- Reduced costs to the NHS
- Increased productivity from maintenance of employment

References:

Ragnarson-Tennvall G. Apelqvist J. Prevision of diabetes-related foot ulcers and amputations: a cost-utility analysis based on Markov model simulations. *Diabetologia* 2001;44 2077-87

Matthew L. Maciejewski. Effectiveness of Diabetic Therapeutic footwear in preventing re-ulceration. *Diabetes care* 2004;27,7, 1774-1782

Andrew J M Boulton et al. The global burden of diabetic foot disease. www.thelancet.com vol 366 November 12, 2005 1719-1724

International Working Group on the Diabetic Foot - 2005 World Diabetes Day on Diabetic Foot Care

K Woolridge AL Graber, P Davidson, AW Brown and JR McRae, Dropout and relapse during diabetes care; *Diabetes Care* 15: 1477-14831996

Nuttall G.H.Great Malvern 2008 and DFSG 2008 (Diabetic Foot Study Group) – Papers presented at Conference but not yet published.

4.1.3 Case Study 3 – Direct GP Access Treatment Pathway for Orthotics

Orthotic Intervention for the Treatment of Plantar Fasciitis/Fascosis

Introduction

Plantar Fasciitis is a common diagnosis given to people with foot problems and according to Martin *et al* (2001), it affects 15% of all adults. It is a painful condition that can reduce the patient's activity whilst treatment is being decided upon. Despite its prevalence, Wolgin *et al* (1994) have found that success rates in treating plantar fasciitis vary between 46% and 100%. This wide range is often attributed to incorrect diagnosis as 'Plantar Fasciitis' is often used as a generic term for heel pain instead of considering it as a specific pathology.

Plantar Fasciitis is often thought to be an inflammatory condition that is initially treated with anti-inflammatory injections, but the majority of patients presented to clinic with the same initial symptoms despite the steroid injections. One could argue that if specific treatment has been administered and the condition has proved to be unresponsive then the patient has not got that specific condition. Both Crawford *et al* (1999) and Lemont *et al* (2003) found that steroid injection showed no significant difference to symptoms, with Lemont *et al* (2003) even stating that 'steroid injection had no place in the repair process and is inappropriate treatment'. Despite this, steroid injection still remains the first treatment choice of many General Practitioners. In light of no inflammation, Aldridge (2004) suggested that Plantar Fasciitis is a degenerative condition and should now be called Plantar Fasciosis; in recent publications this name change is showing growing signs of support.

Diagnosis of Plantar Fasciitis can be easily made with good clinical reasoning, but often the consultant who has received the GP's referral will request medical imaging such as an X-ray or MRI to rule out other diagnosis.

Pathway Options

i) Current pathway (example patient)

In this case study, the patient followed the typical path to the orthotic clinic:

1. First visit to the GP, which resulted in a steroid injection
2. Second visit to the GP, which resulted in a second steroid injection
3. Third visit to the GP, symptoms still persist. Patient referred to orthopaedic consultant
4. First visit to consultant, which resulted in an X-Ray.
5. Second visit to consultant, X-Ray was negative for plantar heel spur (heel spurs do not cause plantar fasciitis as they are positioned at the origin of the short flexor tendon). Patient referred for MRI scan
6. Third visit to consultant, who referred the client on to the orthotic team
7. First visit to the Orthotist who supplied a stock insole to wear for 6 weeks
8. Second visit to the Orthotist, after 6 weeks, for a review to find that the symptoms have decreased
9. Third visit to the Orthotist, after 3 months, for a review to find that the symptoms have gone.

ii) Proposed Pathway

The ideal pathway would be a direct referral from the GP to the orthotics department, where treatment can commence. If the treatment proves to be unsuccessful, the orthotic team can then refer the patient either back to the GP or on to a consultant. i.e.

1. First visit to GP, who refers the patient on to the Orthotic department
2. First visit to the Orthotist who supplied a stock insole to wear for 6 weeks
3. Second visit to the Orthotist, after 6 weeks, for an initial review
4. Third visit to the Orthotist, after 3 months, for a final review. Pathway closed if treatment proves un-successful, if not the patient can either
 - 5 a. Be referred back to the GP
 - 5 b. Be referred on to orthopaedics

Costs

Using data from the Department of Health and published outpatient procedure figures from Plymouth NHS Trust, plus assuming the average orthotic session fee is a notional £60 per hour and the average appointment time is 20 minutes, the cost of the current pathway is:

<i>Visit number</i>	<i>Cost</i>	<i>Timescale</i>
- Visit 1-3, £50 per visit.	Total £150	8 weeks
- Visit 4	Total £70	7 weeks
- Visit 5	Total £650	4 weeks
- Visit 6	Total £40	2 weeks
- Visit 7 (Insole £25)	Total £45	6 weeks
- Visit 8	Total £20	6 weeks
- Visit 9	Total £20	6 weeks
- Visit 10 Discharge	Total £20	12 weeks
-		
	Grand Total £1,015	51 weeks

Using the same data as above, the cost of this pathway is:

<i>Visit number</i>	<i>Cost</i>	<i>Timescale</i>
- Visit 1 (no injection)	Total £30	2 weeks
- Visit 2 (Insole £25)	Total £45	6 weeks
- Visit 3	Total £20	6 weeks
- Visit 4 Discharge	Total £20	12 weeks
	Grand Total £115	26 weeks
- Visit 5 a/b (if required)	Total £30/£40	

Grand Total £115-155 – depending on the success and final outcome

Conclusion

The prevalence of plantar fasciitis is likely to increase as the most common aggravating cause is still thought to be weight increase. By accepting an alternative pathway of treatment there are potential significant savings in both cost to the NHS and time/quality of life for the patient, reducing the number of appointments they require, shortening the care pathway and returning the patient to normal activity.

- Reduced cost to the NHS – up to 90%
- Reduced RRT times – 50%
- Reduced hospital outpatient waiting lists
- Faster return to physical activity for the patient

References:

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