Best Foot Forward
Older people and foot care
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Note The website set up by the authors and described in section 6 of this report is at www.research.plymouth.ac.uk/podiatry
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Foreword

Good foot health is something that many of us take for granted. However, if our feet develop problems they can affect many aspects of our lives. Poor foot health can lead to reduced mobility, which in turn can produce serious physical, mental and social consequences. This is particularly true for older people.

There can be no doubt that primary care services are fundamental for maintaining and improving the health of older people, helping to keep them mobile and independent longer. But at Help the Aged our discussions with older people reveal that such services are all too often in short supply.

Foot care seems to be a case in point. Help the Aged frequently receives comments from older people about the scarcity of podiatry services in their area. There is evidence that many health authorities have withdrawn podiatry services for low-risk patients, to the detriment of the well-being of many older people.

This is why Help the Aged made the decision to commission research, from the University of Plymouth in conjunction with University College Northampton, to investigate the claims that many older people’s needs are currently unmet by NHS podiatry services and explore new ways to meet these needs. In scoping our study we took particular care to give older people the opportunity to air their views about the types of service they would like to be able to access.

The research shows that the older population has a considerable unmet need for basic foot-care services and that this can put at risk people who are trying to self-manage their own foot care. The report also offers some encouragement, demonstrating that some models for providing basic foot care are relatively low-cost, could help to reduce the need for higher-level, and more expensive, interventions at a later stage, and would be warmly welcomed by many older people.

As well as summarising the key findings from the research, the report includes as an appendix a summary of the evidence of need for professional podiatric care. It derives from an extensive review of the available literature on the prevalence of foot pathology in older people. While acknowledging that further work is needed, the summary offers a starting point for further discussion between older people and primary care services about how to meet the needs. The full literature review is available on the internet at www.research.plymouth.ac.uk/podiatry.

To stimulate further discussion and deeper exploration of the themes touched upon in this report, the research team has also developed a website specifically for the podiatry services community.

Help the Aged is delighted to have produced this report and is most grateful to the research team for the excellent work they have put into it.

Paul Cann, Director of Policy and Research, Help the Aged
Foot problems in older people may result from age-related decreases in joint range of motion (leading to inability to maintain basic foot hygiene such as cutting toenails), dermatological conditions, detrimental effects of footwear, or conditions such as peripheral vascular disease, diabetes mellitus and arthritis. People with conditions such as diabetes may be eligible for treatment under the NHS but there is considerable unmet need among those with conditions which are defined as low-risk.

Over half (58 per cent) of older people may have minor problems, some of which would not require professional care. However, Professor Jackie Campbell of University College Northampton estimates that about 25 per cent of people over 65 who need professional foot care are not receiving it and that to provide this would nearly double the size of the podiatry service. Those not receiving such services commonly experience painful foot conditions which may substantially impact upon their quality of life.

**Current foot-care services**

There are approximately 200 NHS podiatry services serving the 300 primary care trusts in England. Increasingly, services are moving towards referral by GPs against set criteria, although a few services still allow self-referral or offer social care such as nail-cutting.

Access to most NHS podiatry services treatment is no longer based on age. Patients with low-risk podiatric conditions and low general health risk are not offered any treatment. Many low-risk patients have been discharged from NHS podiatry care and are receiving private care (£12–£30/session) if they can afford it. Others care for their own feet, if they can, or get relatives or carers to help them. Private practitioners are more likely to be providing regular nail care while NHS podiatrists see at-risk patients and encourage self-care for low-risk patients. Approximately 16 per cent of older people received NHS podiatry treatment in England in 2002–3.

**Innovative foot care**

There are a variety of innovative services and we do not claim to have identified all. However, they include the ‘empowerment’ (education) of patients and other initiatives such as nail-cutting at discounted prices (£3.50–£10/visit) by trained volunteers. The only published research we have found into the cost-effectiveness of such schemes is one randomised trial of an ‘empowerment lecture plus nail pack’ scheme. The authors concluded (though on fairly weak evidence) that this type of scheme may be more cost-effective than traditional care in the long term.

**Older people’s views on podiatry services**

Older people seek NHS podiatry services for various reasons including limited mobility, inability to manage self-care, and a belief that free care should be available for people with ‘bad feet’ who have difficulty paying for private treatment. When patients are discharged from NHS podiatry care they may opt for private podiatry care if they can afford it. Others may rely on their partner or a family member for help, but this can often be problematic, especially if the partner or relative is also old and has difficulty bending.

Those who have no help have to care for their feet the best they can, often with poor results. For example, one of our interviewees who tried to cut his nails cut the top of his toe off while doing so. Another did not think it was worth paying for a private podiatrist to care for his corns as all he seemed to do was to shave them off. This man now cuts his own corns off using a
razor blade and causing occasional bleeding by shaving too much off.

Although views in previously published papers on the ‘empowerment model’ were positive, the older people we interviewed in 2004 were very negative. Many were expecting to receive physical help rather than advice on how to care for their feet. They felt that the talk was patronising. They knew how to care for their feet and if they did not have trouble with bending down, strength or eyesight, they would still be doing so. Those in Cambridge who had not experienced the talk were more positive about the possibility but still said they would rather have physical help than just advice. Some mentioned classes organised by a physiotherapist to help with their posture and walking that they found very helpful.

Although there were some concerns about qualifications and training, the idea of a volunteer from Age Concern or a similar organisation coming to visit them at their home to provide foot care was received very positively. Visiting a social services day centre for nail care was also viewed as a possibility, especially if the person was more mobile, although for some the lack of bus routes or lack of parking presented a problem. Those receiving private care were very happy with the care they had received.

A common wish expressed by older people was to have a service that reflected their needs. Many felt that they were entitled to receive care. Some were a little bitter to find out, after paying tax and National Insurance contributions all their working life, that now, when they needed some care, it was not available. There was a feeling that older people were the ‘forgotten army’. Many seemed to appreciate the fact that we had taken interest in their well-being and wanted to find out what they thought.

**Costing alternative services**

Few data are available on the relative cost-effectiveness of alternative services, either disinvestment in podiatry by the NHS versus previous more comprehensive care, or of innovative services. In the absence of good data we can make some informed guesses and manipulate these to see the implications of our estimates. We have developed a simple spreadsheet model that is available for users to input their own assumptions. Patients with low-risk podiatry conditions are classified as:

1. self-care or no care
2. empowered patients (an ‘innovative service’)
3. traditional low-risk podiatry clinic care.

High-risk podiatry clinic care assumes attendance at a podiatry clinic more frequently, with higher NHS and patient costs. Patients may become high-risk if receiving inadequate other forms of care.

In addition, there are exceptional cases, or ‘system failures’ – patients who suffer a major problem as a result of their (lack of) foot care: for example, a hip replacement may become necessary following a fall attributed to poor foot care.

The balance of costs changes for different sets of assumptions within the model. For example, with one set ‘reduced care’ (i.e. restricting access to low-risk podiatry services) is cheaper than traditional care, but if the cost of ‘exceptional’ cases is increased, disinvestment in podiatry services can become more expensive than a traditional podiatry clinic. With another set of assumptions empowered patient care is cheaper than reduced care.
1 The foot-care needs of older people

1.1 Introduction
The demands of older people for foot care are often less than foot-care needs as determined by podiatrists. This report is particularly concerned with low-risk needs on the basis that high-risk podiatry care is not subject to the same level of ‘rationing’ or disinvestment as has been seen recently for low-risk care.

1.2 Summary of main pathologies
Foot problems in older people may result from age-related decreases in joint range of motion, dermatologic conditions, detrimental effects of footwear, and systemic conditions such as peripheral vascular disease, diabetes mellitus, and arthritis. Furthermore, the definition of a foot problem may also include an individual’s inability to maintain basic foot hygiene (e.g. cutting toenails) or difficulty in purchasing comfortable shoes. (Menz and Lord, 1999)

In order to carry out a systematic literature review we asked a panel of podiatry service managers to prioritise ‘low-risk’ foot conditions, indicating where professional interventions are most desirable and least indicated. Only low-risk conditions were considered because it is generally accepted that people with medium/high-risk conditions are eligible for treatment under the NHS. Unmet need is therefore likely to come from the low-risk conditions.

Medium risk is presented when increasing discomfort or pain is noted in low-risk conditions. High-risk conditions include:

<table>
<thead>
<tr>
<th>Corns</th>
<th>Thickened skin with a central core</th>
</tr>
</thead>
<tbody>
<tr>
<td>Callus/tyloma</td>
<td>Thickening of skin</td>
</tr>
<tr>
<td>Plantar neuroma</td>
<td>Benign tumour affecting a nerve under the foot.</td>
</tr>
<tr>
<td>Ganglion/bursa</td>
<td>A cyst/fluid-filled sac</td>
</tr>
<tr>
<td>Fissure</td>
<td>A crack in the skin often seen round heels or between toes</td>
</tr>
<tr>
<td>Abrasions/trauma</td>
<td>Breaks in the skin</td>
</tr>
<tr>
<td>Symptomatic nail pathology</td>
<td>Painful nails</td>
</tr>
<tr>
<td>Heel deformity</td>
<td>Bony abnormality</td>
</tr>
<tr>
<td>Mid-tarsal deformity</td>
<td>Deformity affecting the mid foot</td>
</tr>
<tr>
<td>Hallux valgus/rigidus</td>
<td>Bunion</td>
</tr>
<tr>
<td>Lesser toe deformity</td>
<td>e.g. clawing of toes</td>
</tr>
<tr>
<td>Exostosis</td>
<td>Bony outgrowth</td>
</tr>
<tr>
<td>Fungal infection – skin</td>
<td>e.g. athlete’s foot</td>
</tr>
<tr>
<td>Anidrosis/xerosis</td>
<td>Dry skin</td>
</tr>
<tr>
<td>Hyperhidrosis</td>
<td>Moist skin due to excessive sweating</td>
</tr>
<tr>
<td>Fungal infection – nails</td>
<td>Nails become discoloured and thickened</td>
</tr>
<tr>
<td>Asymptomatic nail pathology</td>
<td>Nail conditions which are not painful</td>
</tr>
<tr>
<td>Maceration</td>
<td>Moist, peeling skin</td>
</tr>
</tbody>
</table>
ulceration, tissue breakdown, infection, neoplasm, inflammation, cellulitis, gangrene and Charcot joint.

At any level of risk, the presence of a relevant medical condition may make professional intervention essential. These medical conditions are:
- neuropathy
- oedema/edema
- rheumatoid arthritis
- osteoarthritis
- diabetes
- hypertension (with relevant complications)
- peripheral vascular disease/peripheral arterial disease
- cardiovascular conditions
- malnutrition
- compromised immunity
- medication factors
- scleroderma
- lupus
- arthritis
- gout
- Raynaud’s disease
- Charcot Marie tooth syndrome
- cerebral vascular accident.

1.3 Estimated need and unmet need
An extensive survey of the existing literature on the prevalence of various conditions was undertaken (see Appendix). This was not straightforward as the studies varied widely in their scope, methods and the populations from which the data were collected. One reliable estimate available for people over 65 with foot problems is from a 1986 study which estimated need by both self-report and chiropodist. That study estimated that 4 per cent of people over 65 years have major foot problems, 22 per cent have moderate problems, 58 per cent have minor problems and 16 per cent no problems (see Appendix). Interestingly, the prevalence of foot problems appears to be 60 per cent higher when assessed by chiropodists than it is by self-report.

Whereas it is likely that those conditions classified as major and moderate would require professional care, the minor problem category would contain conditions for which professional care would not be considered essential. Within the list of conditions requiring professional care (see page 8), the most prevalent condition which might be considered as a minor foot problem is corns and calluses. It is reasonable therefore to estimate the total need for professional foot care by combining the prevalences for major and moderate conditions with those for corns and calluses, making allowances for double counting. Professor Jackie Campbell has used these figures and estimates of corns and calluses from other more recent studies, to estimate the total need for professional podiatric care as 69 per cent of the over-65 population.

Garrow et al in a recent study (2004) in two general practices in north-west England found that 41 per cent of people over 65 had received professional foot care in the last six months. Using these data along with both Department of Health data and other studies, Campbell estimates that about 25 per cent of over-65s need professional foot care and are not receiving it. She goes on to estimate that the podiatric workforce would need to double to deal with this extra demand.
The circumstances of older people who require podiatry services but are unable to access them vary. However, they might include older people who are medically quite fit (and are excluded from NHS care for this reason) but have painful calluses and corns, often affecting the toes or ball of the foot. Misshapen or deformed toenails are also frequently seen in people over 65 and can cause considerable discomfort. All these conditions can be chronic and can have a substantial impact on quality of life as well as leading to possible further complications, such as tissue breakdown, infection or ulceration if left untreated. It has also been shown that older people are more prone to falling if they suffer from painful foot conditions and wear unsuitable footwear.

The case for providing greater access to professional foot-care services is strengthened by research undertaken by Campbell et al (2002). They note that there are striking associations between age and the prevalence of oedema, moderate/severe inflammation, absence of vibration sensation and decreased mobility. The prevalence of more severe nail pathologies and of insensitivity to touch also shows increasing trends with age. Risk of developing high-risk hyperkeratosis (corns and/or calluses plus circulatory problems), sensory deficit in feet and walking deterioration doubles at age 75 compared to age 65. Lack of sensation in the feet can result in the development of undetected tissue damage: hence the importance of monitoring peripheral sensation in all patients, particularly those in the older age groups, and of ensuring that such patients have access to a foot-health screening service.

1.4 Social foot care
This term is usually applied to simple foot-care tasks which can normally be undertaken by a non-medically trained person or healthy adult. Washing the feet and cutting non-pathological toenails (simple nail-cutting) are two examples of this. Brodie et al in a study of 700 people in 1983 found that 62 per cent of those over 65 had difficulty cutting their own toenails. Partially in response to this report and others giving a similar indication of the need for social foot care among the elderly, Age Concern now runs a number of toenail-cutting schemes in several parts of the country using volunteers often trained by local NHS podiatry departments.

Social foot care is an important aspect of the maintenance of good foot health and can often not be accomplished by older people due to physical difficulties in bending, breathing problems when bending, onset of dizziness, tremor or problems with eyesight. However, for this study social care was not included in the definition of unmet need because it is generally recognised that, although important, social foot care does not currently fall within the remit of an NHS service as it does not require professional expertise.

1.5 Estimated cost of unmet need
The total number of first podiatry contacts (number of different patients seen that year) for England in 2002–3 was 2,161,000. In September 2003, there were 3,807 qualified podiatrists employed by the NHS (Hansard, 2004): an average of 568 patients per podiatrist, or 1 podiatrist per 2,000 population aged 65 and over.

If the NHS were to extend its services to those older people who needed professional care but were not getting it from any source, it would need to treat approximately 1,970,000 extra people, which, at current staffing levels, would require an additional 3,500 podiatrists. This would nearly double the size of the current NHS podiatry service.
1.6 Conclusions
Over two-thirds of the population over 65 have foot problems; a quarter of those over 65 need professional foot care and are not receiving it. The podiatric workforce within the NHS would need to double to deal with this extra demand.

The effects of not receiving professional foot care include foot health deterioration, which can lead to increased levels of physical, mental and social problems and increased costs falling on other health and social care services.
2.1 Introduction
According to Merriman, the aims of podiatry services are to maintain tissue viability and improve foot function. These two are not mutually exclusive but one tends to be more significant than the other at various stages of treatment. In our study we asked chiropodists to categorise patients in six different groups including a maintaining tissue viability group which included people with callus requiring podiatrist attention or patients who require routine nail care and could be treated by podiatrist. The percentage of people thought to be in this group varied by health authority from 11 to 33 per cent of the total work.

2.2 Policy context
Traditionally NHS podiatry services have provided foot care to those people presenting with a foot problem, priority having previously been given to people aged 60+, people with disabilities, schoolchildren and expectant mothers. However, since the mid-1990s there has been a gradual shift in emphasis with many trusts providing a service based on the podiatric need of the patient and excluding social foot care. Inevitably in some areas demand has outstripped the resources available and in these instances referral criteria have often been introduced. These tend to give priority to patients with medium- or high-risk conditions such as diabetes, peripheral vascular disease, rheumatoid arthritis, infection ulceration and podiatric conditions causing significant pain and/or loss of function. This has often led to a reduced or non-existent service in these areas for patients classed as low-risk with less severe medical and podiatric conditions.

In some cases these changes have been brought about by cuts in the podiatry budget. In 1996 the then Cambridge and Huntingdon Health Authority, faced with a £4m shortfall in its budget, ordered a series of service cuts to address this deficit. The podiatry services in Cambridge and Huntingdon had their budgets reduced by 40 per cent and as a result now have caseloads consisting of 90 per cent high-risk patients, all defined low-risk patients having been discharged.

2.3 Current structures and systems
There are 140–200 podiatry services in England, mostly based in primary care trusts. The way that each service is delivered is determined locally, so there is no common approach to the mechanisms of referral or criteria for access to NHS services. However, increasingly services are moving towards a secondary referral system (usually via GPs) against set criteria. Services which offer a self-referral system and/or offer social care (e.g. nail-cutting) as well as treatment for podiatric conditions can still be found but are rare.

Patients’ perceptions of their ability to care for their own feet safely may be seen to be a flawed measure, open to misrepresentation as patients wish to remain eligible for NHS care. However, the data from one study show that the patients’ reports correlate well with objective assessment of the severity of their pathology. The proportion of patients reporting that they cannot self-care also consistently rises with age, in line with increasing frailty. Patients’ reports of their ability to care could therefore be used with some confidence in an assessment of their foot-care needs.

2.4 Rationing, eligibility criteria and disinvestment
An informal survey of access criteria to NHS podiatry services carried out by David Milns in September 2001 achieved a 60 per cent response among 150 podiatry service
managers in the UK. The survey found that 48 per cent of services had some form of restricted access, half using scoring systems and half risk definitions. It seems likely that the proportion with restricted access has increased since 2001.

Using assessment tools or matrices is very common in determining whether a patient is eligible for care. A combination of medical risk factor and clinical priority is used to decide eligibility. The most commonly listed medical conditions giving patient priority for foot care are diabetes, rheumatoid arthritis and neuropathic diseases. Referrals from a GP or other health professional are commonly required in order for anyone to receive podiatry care and in some services access to treatment is only via GP referral. However, in some services patients with medical conditions that would put feet at risk, or patients with physical, learning or mental disability, are allowed to self-refer. Ingrown toenails and ulceration are seen as needing treatment and often receive an automatic referral. Domiciliary care is offered by some services if the patient is housebound for medical reasons and has no friends or family to help with the transportation to clinic. However, requests for domiciliary visits need to be supported by the patient’s medical practitioner. Patients with low podiatry and low general health risk are not offered any treatment. Furthermore, if the patient is able to perform their own basic foot care or they have a relative or carer who is able to help with this, no care is offered. Patients with a small number of corns or calluses who do not have a medical condition that would make the problems limb-threatening are excluded from the service, as are patients with verrucae, fungal infections of the skin and patients who do not comply with agreed treatment. Access to most podiatry services treatment is no longer based on age. However, many older people retain a sense of entitlement and some would argue that public awareness of the roles and responsibilities of modern podiatry service has to be increased.

The change in podiatry services has been to move from priority groups such as older people to more needs-led treatment policy aiming to increase self-care and decrease the dependency on podiatry service where appropriate, often leading to discharge of patients when possible. Underfunding rather than lack of qualified staff is seen as the reason for the cuts in many podiatry services. Discharge rates of 16.6 per cent have been recorded for new patients applying for podiatry care. In a recent audit of patients being discharged from NHS podiatry clinics where they were allocated to four different dependency categories (ranging from patients who were able to self-care to patients who were dependent on the service), 20 per cent of patients were switched to a ‘greater dependency’ category during the audit period and 6 per cent to a ‘lesser dependency’ category.

2.5 Private, informal and NHS care
The NHS Task Force’s review on podiatry recognised that funding is not sufficient to provide nail-cutting for non-pathological nails and that the skills and expertise of podiatrists are being undervalued by providing this care. Use of generic workers such as foot-care assistants to care for non-pathological nails was recommended, ideally not funded by the podiatry budget. NHS podiatry care is concentrating on treating high- and medium-risk patients. Due to disinvestment many services have had to reduce the services offered to low-risk patients who do not have high medical and podiatric needs. Many low-risk patients have been discharged and are receiving private care if they can afford it.
In a recent survey private practitioners were found to provide regular nail care more frequently than NHS podiatrists whereas corn and callus removal were provided with equal frequency. Podiatrists in NHS practice were more in contact with at-risk patients than private podiatrists. The use of foot-care assistants and encouragement of self-care is more prominent in the NHS than it is in private practice.\textsuperscript{19}

Providing older people with basic foot care and nail trimming is seen by some as a neglected area of community care as podiatrists concentrate on treating people with more complex foot conditions.\textsuperscript{20} In many NHS podiatry services more emphasis has been put on empowering patients to self-care for their feet whenever possible. In North Warwickshire PCT patients are offered an initial appointment; patients whose application form intended them to be high-referral need are seen more quickly than medium- or low-referral need patients; and patients whose feet are not at risk are given advice and leaflets on how to care for their feet properly.\textsuperscript{21}

Patients who are discharged tend to seek private care for their feet if they can afford it. The prices of private podiatrists vary greatly. Among the older people who were interviewed for this study the prices being paid varied between £12 and £30 per session; in some cases the price for a home visit by the podiatrist was the same as the price quoted by someone else for an appointment in the private podiatrist’s practice. Couples were also offered a discounted rate if both partners had their feet done. No official list of treatment prices for private podiatrists is available from the Society of Podiatrists and Chiropodists: it simply suggests contacting individual podiatrists to find out the price for treatment.\textsuperscript{22} People who are receiving private podiatry care have rated their satisfaction with the service higher than people who are receiving NHS care for their feet; NHS patients wanted more frequent visits or more time with the chiropodist.\textsuperscript{23}

Under some initiatives around the country nail-cutting is offered at a discount for older people. The treatment is often given by a trained volunteer. Age Concern in Cherwell District Council, North Oxfordshire offers a basic foot-care service called Sole Mates, where people of 50 and over who are unable to cut their nails safely are assigned a volunteer who visits them every 6–8 weeks to give them a foot bath, nail-cut and foot massage at a cost of £3.50 a visit.\textsuperscript{24} In Hampshire a nail-cutting service is offered at a cost of £10 per visit at clinic for older people who have difficulty cutting their nails.\textsuperscript{25} Age Concern Brighton offers nail-cutting at a clinic at a cost of £4 or via home visit costing £5.\textsuperscript{26}

2.6 Current NHS expenditure on foot care for older people
The Department of Health statistics for NHS podiatric care are reported yearly in the KT23 returns (Department of Health, 2003), which state the number of new episodes of podiatry care each year (initial contacts) and the total number of different people seen by podiatry service providers each year (first contacts).

The statistics are broken down by NHS trust and the initial contact data is broken down by age group. These data provide the information that 474,000 people aged 65 years and over had a ‘new episode of care’ in the year 2002–3. A new episode of care (initial contact) can be viewed as a patient starting a new course of treatment, usually referred to the podiatry department from a hospital, GP or other health service professional. Continuing treatment for the
same condition qualifies as a new episode of care only if there has been a break of more than six months since the last contact. First contacts are therefore more useful for the purpose of trying to estimate the total number of people currently receiving treatment.

The overall ratio of first initial contacts for 2002–3 was 2.62. Applying this to the number of new episodes of care would give an estimated number of first contacts for those aged 65 years and over of nearly one and a quarter million. However, this assumes that the average length of an episode of care for an older person is the same as that for the whole population. Nearly 60 per cent of all new episodes of care are for patients aged 65 years and over and so it may be argued that the overall averages are weighted in favour of this age group, but accurate data on this are not available. The total number of people aged 65 years and over in England in mid-2002 was 7,880,600. The Department of Health statistics therefore suggest that approximately 16 per cent of older people received NHS podiatry treatment in England in 2002–3.

Although a comprehensive review of health and social care costs has been published by Netten and Curtis we found the approach of using personal communication with podiatrists adequate for our simple cost model. We obtained cost data mostly from personal communications from podiatry service heads and from one research publication. We asked our NHS clinical advisory group to review our provisional figures.

**Low-risk clinic** Morecambe PCT quoted a cost per patient contact of £10.68 and cost per patient per year of £31.90 (suggesting three contacts a year). The group considered four treatments a year more realistic, with two-thirds being seen by a foot-care assistant and one-third by a podiatrist. They also thought £15/contact more realistic ( = £60/year).

**High-risk clinic** The group thought that high-risk patients average five treatments a year. As these contacts are likely to be with a podiatrist rather than a foot-care assistant, high-risk clinic care may cost twice the price of low-risk care.

**Innovative services** The Calderdale patient empowerment study found that the cost of care for empowered patients was about the same as for usual care over the six months of study, but expected it to be cheaper in the long run. We have estimated costs as about £30.

In Newark and Sherwood PCT a nail-cutting scheme was initiated, funded by a health improvement grant, for people aged 75 and over who are unable to cut their own toenails. The total cost is estimated at £8,000 for 2004–5. (Currently 250 patients are registered and annual contact number is approximately 1,000: cost per treatment is therefore £8/patient/contact.)

**2.7 Conclusions** About 1 in 6 older people receive NHS podiatry care. Low-risk patients attending a clinic may attend three to four times a year at a cost of £35–60. High-risk patients may cost twice as much, e.g. £70–£120 per year.
3 Innovative foot care for older people

3.1 Introduction
Many podiatry departments have reacted to the challenge of discharging low-risk patients from the service by introducing new, cheaper schemes. Lack of funds to provide simple foot care, such as cutting non-pathological toenails, has meant that new forms of care have been tried to cater for the needs of mainly older people who are no longer eligible for NHS care. We contacted heads of podiatry services across England to identify and find out more about such schemes.

A list of contacts was obtained from the Society of Podiatrists and Chiropodists and 117 heads of NHS podiatry services were contacted via email. The email asked about access criteria, services for low-risk patients, cost of services for low-risk patients and the consequences of discharge. Twenty-seven replies were received (36 per cent response rate excluding undeliverable emails). If replies needed clarifying, the individual was emailed again to ask for more information.

3.2 General findings of practitioner consultation
Although we made contact with only 27 heads of service, our email discussion with them, reviews of podiatry discussion lists and discussion with Campbell and Milns’s group in Cambridgeshire suggest that there are only a few variations on new styles of podiatry service and that we have some information on most. The website (see imprint page) gives details, and visitors to the website are encouraged to use the discussion list to provide information about other innovations.

The most frequently mentioned innovative schemes were education programmes and volunteer nail-cutting schemes. Education programmes varied from educating staff in nursing homes to providing group education sessions, such as Sheffield empowerment model, which aims to enable patients to care for their feet themselves. Volunteer nail-cutting services were often organised with the help of Age Concern. Some of these schemes charged a nominal fee while others were free. Also, the use of trained workers in social services day centres for simple nail care was mentioned.

The most frequently mentioned innovative schemes were:
- Education in nursing homes (6 services)
- The Sheffield empowerment model (3 services)
- Group education sessions (3 services)
- Working with Age Concern on toenail-cutting (3 services)
- Foot-care courses for carers and patients (3 services)
- Training for patients and carers (2 services)

Others included a health information centre, trained workers in social services day centres, training for foot-care nurses on wards, and ‘events’ to support discharged patients.

3.3 Examples of innovative practice
Sheffield model. The ‘Sheffield model’ of a group empowerment talk has been used (with variations) by several services. In a group setting, older people (and their carers if present) are given advice on how to care for their feet and nails. Some services offer a nail-care pack including clippers and other items for nail care. Often the eligibility criteria for podiatry treatment are explained and patients are reminded that they can reapply for the service if their foot condition changes. In some cases, people can have their
feet assessed by a podiatrist if they still think they are eligible for care. Leaflets with written care instructions are given to the patients.

Although the Sheffield model has been adopted by several services, research into the various schemes is limited. Moore et al\(^29\) carried out action research to refine the service but no random controlled trial (RCT) or comparative study was carried out in Sheffield. Although the Sheffield model was presented positively, in the main, by the authors, it is worth noting that 57 per cent of those invited in Sheffield did not attend and that some low-risk patients were unhappy that they had been invited to a talk rather than treatment. However, when an explanation was given, most agreed with the reasoning and found the talks useful. Only seven low-risk patients have formally complained about the new system, usually stating their age as being a valid reason for requiring treatment.

**Calderdale study** In a study in Calderdale, which differs from the basic Sheffield model mainly in the issue of the foot-care pack, Waxman et al conducted an RCT of a patient self-management programme with six months’ follow-up and economic evaluation.\(^30\) In their project (called Footstep: Foot Self-Treatment Evaluation Project), 155 participants who consented were picked randomly for either usual care (UC) or a self-management programme (SMP). Participants in SMP attended a one-hour educational session and were given a foot-care pack including nail clippers, pumice stone and other items. There was no clinical difference between the groups after six months. Only direct NHS costs, not patient costs, were used in the study. It was concluded that in the long-term follow-up the SMP may be more cost-effective.

**Age Concern** Volunteer nail-cutting schemes where the volunteer visits the patient at home or the patient comes to the clinic for the service are often available with the help of Age Concern. The volunteers have been trained in simple foot care, generally by the NHS podiatry department, can safely care for nails, and are able to notice if something is seriously wrong with patients’ feet, in which case they will recommend applying for professional care. To our knowledge, there have been no evaluations of volunteer schemes at either day centres, clinics or home visits to date.

### 3.4 Conclusions

The most frequently cited innovations in response to the discharge of patients from low-risk clinic services were education/empowerment sessions (‘Sheffield model’) and toenail-cutting services via volunteers (‘Age Concern’).
4 Older people’s views on podiatry services

4.1 Introduction

Previous studies  There have been a number of studies in which the views of older people about foot care have been sought. A recent comprehensive study was published in February 2004 by Lisa Farndon et al, from Sheffield South West PCT, on the Sheffield model. (Lisa Farndon facilitated our own interviews.) In their study, they interviewed 18 new patients across nine centres to find out why patients sought podiatry services and what they wanted from them.

Three main factors motivated people to seek podiatry services: (1) mobility, particularly if mobility was causing pain; (2) an inability to manage self-care; and (3) a belief that free care should be available for people with ‘bad feet’ who had difficulty paying for private treatment. Patients wanted treatment and advice. They wanted treatment to relieve pain, maintain mobility, improve the appearance of their feet and cure the problem. They wanted advice on preventing and treating the problem.

Our interview data  We aimed to obtain the views of older people about foot care, the withdrawal of services, and people’s views about ‘innovative’ services. We aimed to include a summary and quotes from this on our website informing the debate about podiatry services.

Samples  Interviews have been completed with nine people in Sheffield who were ‘clients’ of the ‘empowerment model’ of podiatry care and seven people in Cambridgeshire who have had services withdrawn without any ‘substitute service’.

Interview  The older people were presented with either two or three scenarios. Older people who had been in the patient empowerment session were asked their views about visiting a day centre where simple nail care would be offered, or about having a volunteer who would come to their home and care for their feet. Older people who had been discharged from NHS podiatry care and had not received any form of innovative care were asked their views about attending patient empowerment sessions; questions put to people who had attended innovative services were also put to the former NHS patients.

4.2 Perceived foot-care needs

The majority of participants’ foot-care needs included an inability to reach nails owing to problems with bending, thick toenails and corns. Difficulty with bending was the most common of these problems:

‘My problem is getting down to cut my nails properly…’

The effect of not being able to bend down sufficiently in order to care for their feet led to decreased mobility and pain for some participants. Several participants spoke of medical conditions such as arthritis, joint problems caused by injury, and back problems. However, as these conditions do not fall within the foot-care category of ‘high risk’, such as diabetes, participants stated that they were unable to make use of NHS podiatry services. Therefore, participants are left with two options in order to have their feet cared for: managing their foot care themselves or accessing private podiatry services.

4.3 Views on managing own care

As discussed above, many of the Sheffield and Cambridgeshire participants, owing to the ‘non-urgent’ nature of their foot problems, chose to manage their own foot care or felt compelled to do so because of the cost of private services. Although participants knew how to care for their feet, problems with bending and visual impairment often made it
difficult for them to manage and sometimes caused them harm. For example, although it was generally understood that nails should be filed rather than cut to eliminate the danger of accidentally cutting toes, several participants had cut their toes while trying to care for their feet:

‘I tried to cut one and I got my toenail and made it bleed…’

Participants who suffered from corns also attempted to treat them by copying practices that they had witnessed when attending appointments with qualified podiatrists:

‘Every so often I get some corns that come up… so I get a razor blade and shave it off… Yeah, well, I went to a chiropodist once or two or three times but that’s all he seemed to do…’

Although in the case above shaving corns appeared to have a beneficial effect on the state of the participant’s feet, this practice could also lead to injury:

‘I used to use scalpels quite often for pattern-cutting. I’ve got three scalpels and did find filing [the callus] was easier for me… By filing it down it got to a point where I couldn’t take it. It was too tender to touch with a file and that’s where this one gets, like you can see…’

While in the main participants tried to take care of their own feet as best they could, some participants relied on family members, generally their spouses, to provide care. However, as spouses often suffered from similar mobility and medical conditions, this also caused some difficulty, and, additionally, participants were often reluctant to accept help from family members:

‘I’m afraid I don’t really enjoy my husband having a go at my feet. They get very tough…’

4.4 Views on private care
The majority of participants had accessed private podiatry services at some point since discharge from the NHS. Although some participants in Sheffield were members of a scheme that allowed payment to be spread over time, they generally perceived paying to see a private podiatrist as being too expensive, and a number of participants only attended a short course of appointments before deciding to try to care for their feet themselves:

‘No, I just stopped going… partly because I can shave it [a corn] off myself and then it wouldn’t cost that amount of money.’

Those participants who were happy to pay for private care either perceived the care that they received as good value for money or received benefits such as Attendance Allowance or Disability Living Allowance, which allowed them to afford such services:

‘Actually, [my wife] gets full Attendance Allowance, you see, and I get the lower rate – so we get the money for it.’

However, many participants did not receive benefits and felt that they could not afford private care. As such there was an element of resentment about having to pay for podiatry services, as a result of which some participants were caring for their own feet.

4.5 Views on disinvestment in services
When patients are discharged they may opt for private podiatry care if they can afford it. Many prefer this, as a private podiatrist will visit them at home and at times that suit the patient.

‘That soon runs away with your money though… I think it was about 20-odd pounds a time really, something like that… Well, I went three times but after that I packed it in.’
However, it has been suggested that as little as 25 per cent of the help older people receive with their daily living activities is provided by paid help or formal services. Spouses, friends and relatives are the major source of help for older people in their everyday life. This may put a burden on the family which is difficult to measure.

‘So I have to rely on podiatry or somebody helping me… At times my wife helps me out… She is also in difficulties bending down…’

Many cannot afford the fees of private podiatry, so if they do not have relatives or friends who can offer them help the only thing left for them to do is to care for their feet as best they can, which often has poor results. For example, when one of our interviewees tried to cut his nails he cut off the top of his toe. Another did not think it was worth paying for a private podiatrist to care for his corns as all he seemed to do was shave them off, so now he cuts his own corns off using a razor blade – which causes occasional bleeding if he shaves off too much:

‘Well, yes, I too tend to shave off too much or something like that and then it starts bleeding – but otherwise it seems to work all right.’

4.6 Views on innovative models of care

4.6.1 ‘The empowerment model’

Participants in Sheffield had experienced an empowerment session which involved attending a talk about foot care and receiving a pack of implements with which to care for their feet. However, the majority of participants who took part in this session attended in the belief that they would receive foot care and expressed a degree of disappointment when it was explained that such care was not offered.

When asked by the interviewer about the effectiveness of the talk, participants said they felt the information they were given was insufficient. Some felt the information provided was too basic and told them nothing new about the care of their feet. Other participants felt the information on caring for their feet was worthless as they could not put into practice the advice they were offered because the majority were unable to reach their feet to care for them. Furthermore, many had been referred to the podiatry services via their GP and were expecting to receive physical help rather than advice on how to care for their feet.

This caused very negative feelings towards the empowerment service and participants said that they felt the ‘talk’, as they referred to it, was useless. It was apparent that some felt they were being patronised in being told how to care for their feet since they had been doing it all their lives and, if they had not had trouble bending down, reduced strength or poor eyesight, they would still be caring for their feet. However, some had learned new methods, for example, using files rather than clippers, which had been a surprise especially for some – especially those who had thick nails.

‘I have been told that I have to file them… Well, unless I take one out of a toolbox, it’s a bit of a pain.’

‘And they told us, don’t cut your toenails. You should file them like that from the back to the front… and they were all disgusted. There were about thirty of us. All they done was talk to us for about half an hour… What’s the point of that? Most of them can’t cut their nails because they can’t get down to cut them…’

Although the majority of participants in Sheffield felt that they had not learned
anything new about foot care from attending the talk, they did gather some useful information from it. A number of participants who were struggling to care for their own feet had previously cut themselves while attempting to trim their toenails and the talk had made suggestions which perhaps would prevent this. Some were advised not to use metal files as over-use could cause the file to become too sharp and act like a knife. Participants who had difficulties bending down were advised to buy long, non-metal nail files and were provided with information about where to purchase such files. However, they said they had difficulty in locating these files.

The older people we spoke to who had been discharged from podiatry and had not until then received an empowerment talk were more positive about it, but many said they would prefer to receive physical help rather than just advice.

Having their feet checked by a podiatrist to see if they were eligible for care was appreciated by many. Some people in the Cambridgeshire sample expressed the wish to attend classes that would help them with their posture and walking, while some had attended a class organised by a physiotherapist and found that very helpful.

‘He teaches us exercises and we have to do them. It is hilarious really, but we do try to follow the directions because it tells us how to sit up properly in our chairs [laughter] because everybody had backache and some had hip replacement and all this sort of thing.’

4.6.2 A volunteer service

The idea of a volunteer from Age Concern or similar organisation coming to visit older people in their home to care for their feet was received very positively, not least because the service would be free. Older people who were less mobile were particularly happy to have somebody come to their home and cut their nails. However, there was some concern about the qualifications of the volunteer. People thought the volunteer should have at least some training and should be able to tell them if foot problems were developing that would require more professional attention.

‘If anybody came and they weren’t trained, they couldn’t get the scissors through the nails, so they couldn’t, and I wouldn’t let them loose with an electric file. I’d be without toes.’

Some who were using a private podiatry service were inclined to continue doing so:

‘Oh no, I think we prefer the – you know – having to pay. I think we prefer to carry on as we are with paying, rather than having someone who is inexperienced in that.’

The minority of participants were happy to have an untrained volunteer cut their toenails. They thought the volunteer would do a better job than they could, or would be able to tell if there was something seriously wrong with their feet. Some of the patients who were receiving private care for their feet at that moment did not wish to change to a volunteer service. They had a good relationship with the current private podiatrist and they were very happy with the care they had received. Switching from something they knew and were happy with to something they did not know did not appeal to them.

4.6.3 A day centre service

Visiting a day centre for nail care was viewed as a possibility, especially for those who were more mobile. For some, the lack of bus routes or parking presented a problem. Again, concerns were raised about the
qualifications of the service providers: interviewees wanted the helpers to have received some training in simple foot care. Some interviewees mentioned that visiting the day centre could be good for their social life and gave them an opportunity to meet new people. Generally, the interviewees were struggling to care for their feet themselves and were happy to receive any care offered.

Many felt that they were entitled to receive care. Some were a little bitter that, though they had paid tax and N.I. contributions all their working life, care was not available now that they needed it.

‘I’d rather it were done free but at the moment we can pay. But on principle I think I ought not to. Hmm. I’ve never asked the NHS for anything.’

It seems that patient and carer training is beneficial. However, it should not be viewed as the only form of care. The general wish expressed by the interviewees was to receive physical help. People wanted practical workshops that would improve their posture and gait. Patients with diagnosed posture and walking pain or problems would normally be referred to a clinic, therefore it may be argued that such workshops would be inappropriate. However, such advice may help prevent falls (Menz and Lord, 1999) and as patients may not always be diagnosed, or referred, workshops may be worthwhile.

Preventing falls is given special attention in the Department of Health’s report on progress of the National Service Framework for Older People, as well as promoting healthy active living. Information on a range of issues, not simply foot care, may be more acceptable and useful. As far as we know, there have been no evaluations yet of the nail-cutting clinics organised with the help of Age Concern, or of similar initiatives. Anecdotal evidence suggests these services are well received by the older people and are having a positive impact on the everyday lives of older people.37

4.7 Emotional effect of withdrawal of service
There was a degree of confusion, particularly among the participants based in Sheffield, as to how to qualify for NHS podiatry services. As discussed above, some participants who attended the empowerment session were surprised and upset not to receive treatment at the centre on the day of the talk, and then to be told that they did not qualify for NHS podiatry services in the future:

‘I didn’t get much benefit from it [empowerment session] so no, not really, you know, but they only had a talk and I got a letter back saying I wasn’t [eligible] because I wasn’t bad enough for it or anything like that.’

Additionally, participants in Cambridge were very positive about the NHS service that they received prior to discharge.

‘That was years ago, and then I used to attend perhaps every three months. They’d send me a little card to check and those girls were wonderful…’

Although participants understood why the service had to be cut, many felt forced to consider private treatment and, in some cases, showed some resentment at the withdrawal of the regular service that they received previously:

‘No I had to go private, which I did. I was not impressed…’

Finally, some participants expressed concern that the withdrawal of services and, in some
cases, lack of financial assistance in obtaining private services, was due to their age, and that as such their needs were undervalued:

‘I mean the old people seem to be like the forgotten… if you know what I mean – that forgotten army – if you live at home, because they don’t want to know you unless you got a problem…’

4.8 General principles of good practice

Needs-led service  The common wish expressed by the older people was to have a service that reflected their needs. Older people were quite happy to go to the clinic to have treatment if they were mobile enough to do so. However, if they had reduced mobility, they wanted a service that recognised and catered for that.

‘Yeah, that would be useful. As I say, it is just getting down there [to the day centre], you know.’

Qualified helpers  The majority of people were very happy for volunteers to care for their feet as long as they had received some training. To have someone totally unqualified cutting their toenails did not appeal to all of the people interviewed.

‘So I suppose to a complete stranger and just out of the kindness of their heart, wanting to help me, I think I would be a bit wary about it.’

Feeling that somebody is interested in you  There was a feeling that older people were the ‘forgotten army’. Many seemed to appreciate the fact that our study focused on their well-being and that we wanted to find out what they thought and how they were.

‘In 12 years nobody has ever come around and said, you know, “Are you coping?” – or anything like that.’

Receiving personal care  For many it was important that they were treated personally. Podiatrists and carers who had given their time in the past and had made them feel that they were not just another patient were viewed very highly.

‘There was a chap there who was very, very helpful… If we were sitting outside waiting and he was doing somebody, he would come out and say, “Come in, come in. Have a chat, sit down. Have a cup of tea,” and he would talk to them and he used to have a chair and he used to help you and he was very, very helpful and he would go around your toes and then he’d start all over again filing and have a chat about something.’

4.9 Conclusions

Older people seek podiatry services because of limited mobility, an inability to manage with self-care, and a belief that free care should be available for people with ‘bad feet’ who have difficulty paying for private treatment. When patients are discharged, they opt for private podiatry care if they can afford it. Those who rely on their partner or family members for help may find this difficult. Those who have no help have to care for their feet as best they can, often with poor results.

Although views on the ‘empowerment model’ were positive in previously published papers, they were very negative among the interviewees who attended talks in 2004. Many were expecting to receive physical help rather than advice on how to care for their feet. They felt that the talk was patronising. They knew how to care for their feet and would still have been doing so had they not had trouble bending down, reduced strength or poor eyesight. Those in Cambridge who had not experienced the talk were more positive about the possibility
but still said they would prefer to receive physical help rather than just advice.

Both the Sheffield and the Cambridge groups were very positive about the idea of a volunteer from Age Concern or a similar organisation coming to visit them at home to care for their feet, although they expressed some concerns about qualifications and training. Visiting a social services day centre for nail care was also viewed as a possibility, especially for people who were more mobile. However, for some the lack of bus routes or parking presented a problem. Those receiving private care were very happy with the care they had received.

A common wish expressed by older people was to have a service that reflected their needs. Many also felt that they were entitled to receive care. Having paid tax and N.I. contributions all their working life, some were a little bitter about not being able to obtain care now that they needed some. There was a feeling that older people were the ‘forgotten army’. Many seemed to appreciate the fact that in carrying out our study we had taken interest in them.
5 Costing alternative services

5.1 Introduction
Few data are available on the relative cost-effectiveness of alternative services, either disinvestment versus previous more comprehensive care, or of innovative services such as the ‘Sheffield model’. We are aware of only one randomised trial (Calderdale) which provides any data on cost and effectiveness. However, despite the absence of good data we can make some informed guesses as to the likely costs, then model them to see the implications.

For example, if we put a minimum, a mean, and a maximum cost for different variables and see how this affects the total calculated cost, this approach allows us to identify what data are critical to the costing process. By putting different values into the model, it may become clear that whether we estimate the annual cost of traditional podiatry clinic visits as £50 or £70 will not make much difference to the overall cost. On the other hand, changing the estimate of the percentage of patients who suffer major complications from 1 to 1.5 per cent could make a bigger difference to the total cost.

Commissioners of health services could use such a model to help them assess possible costs of different options of service delivery and to identify the variables that need to be most closely monitored in that delivery. Researchers could use the model to identify aspects of care which are most in need of further study.

5.2 Spreadsheet model
We have developed a simple model that allows the user to propose possible costs of different forms of care in a ‘steady state’. The model has an arbitrary population which, of course, can be set to whatever value is required. However, it soon becomes clear in thinking about how the model works that the population size used makes no difference to the balance of costs between different types of service delivery. The population has a given prevalence of low-risk podiatry conditions. People with these conditions will require one of the three types of care (b, c, d) listed above. We assume that low-risk care will be sufficient but, if it is not, the patient may become high-risk and will therefore be referred back to a high-risk podiatry clinic (and require more frequent visits than would be necessary at a low-risk clinic). Exceptionally, patients may suffer major consequences requiring hospital admission.

(b) Low-risk care
We have assumed three alternatives:

- **self-care or no care** This assumes that there is no cost to the NHS. There will still be a cost to the patient. We have not specifically provided a variable in our model for private care (although this could be added if thought appropriate) but a proportion of patients buying private care could be reflected in the average patient cost/case figure input to the model.

- **empowered patients** This assumes that the NHS provides educational sessions and perhaps a foot-care kit, as in the Sheffield or perhaps the Leeds model. The cost to the NHS can be estimated from the Leeds study or varied according to other assumptions. The cost to the patient may be a little more than in self-care (although we have little evidence) as it includes attendance at the educational session.

- **traditional low-risk podiatry clinic care** This assumes a low frequency of
attendance at a podiatry clinic. There will be a cost to the NHS, partly depending on which healthcare professional is seen in the clinic and the frequency of visits. The cost to the patient will comprise the cost of attendance at the clinic, plus any self-care costs, and any additional private care (which we assume may be less than among the self-care group).

(c) High-risk care
We have assumed one form of high-risk care: podiatry clinic care. This assumes attendance at a podiatry clinic more frequently than low-risk care and so has higher NHS and patient costs.

(d) Treatment for major foot problems
Such treatment, we have assumed, would be for the exceptional cases or ‘system failures’ – patients who suffer a major problem as a result of their (lack of) foot care. There may be a small number of such cases even with traditional low-risk podiatry clinic care where the care is not effective in some way or some unusual event occurs. We may assume (but we have no evidence) that the number of exceptional events would increase if there were more people in self-care or no care and possibly also in empowered care. The percentage of people who are exceptional cases will be very low but the costs could be very high as they may require an in-patient stay for days or even weeks.

5.3 Cost assumptions

Low- and high-risk clinic-attending patients
As stated above, we obtained cost data mostly from personal communications from podiatry service heads. We estimated that low-risk patients would attend a clinic three to four times a year at a cost of £35–£60 per patient per year. High-risk patients may attend five times a year and would generally see a higher grade of staff at a cost of £70–£120 per patient per year.

The proportion of patients allocated to a ‘high-risk’ clinic is greater in the ‘reduced services’ model compared to traditional care. We estimated 9 per cent for traditional care but increased this to 24 per cent for the reduced services. David Milns had said that in Cambridgeshire 10 per cent are re-referred as high-risk patients. We have used a figure of 15 per cent in the model.

Patient empowerment programme
Waxman found that the cost of care for empowered patients was about the same as for usual care over the six months of study, but he expected it to be cheaper in the long run. We have estimated costs at about £30.

Exceptional cases
These are the most difficult to cost. We have only anecdotal evidence of one person who suffered problems with artificial hips when she tried to cut her toenails. The cost of one hip replacement, a common consequence of falls in older people, is also about £8,000.

5.4 Summary of costings for various alternatives
Table 1 below (page 27) shows the model results with a range of assumptions of care distribution and cost, assuming a population of 10,000 older people and a prevalence of low-risk podiatry conditions of 20 per cent.

As can be seen with these particular assumptions, ‘reduced care’ (i.e. restricting access to low-risk podiatry services) is cheaper than traditional care in both sets of cost assumption. With the second set of cost assumptions, empowered patient care becomes cheaper than reduced care. Our cost figures can be disputed but users can use the model to see the effects of various assumptions. Clearly the population size and prevalence do not affect the relative costs of the different patterns of care.
The same table shows a comparison of ‘traditional’ versus ‘reduced service’ versus ‘empowered patients’ with the assumptions that self-care (or no care) does not cost the NHS anything but does cost the patient £2 per year. Empowered patients attend an introductory lecture and receive a ‘nail kit’ at a cost of £30 to the NHS. The cost to the patient is £4, which is more than for self-care as they attend lectures involving travel, hence travel costs. Similarly NHS and patient costs have been estimated for a low-risk and high-risk clinic, and for ‘exceptional cases’. The exceptional case cost may cover anything from day cases through to hospital admission for hip replacement (as described above). We have allotted a relatively low cost for this, at £300 for NHS costs and £100 for patient costs (travel, lost time etc.).

In this model we have assumed that in ‘traditional care’ 20 per cent of people requiring podiatry care will self-treat with no NHS assistance and 70 per cent will attend a low-risk podiatry clinic. The ‘reduced services’ model assumes that 74 per cent self-treat and the low-risk podiatry clinic is closed (0 per cent treated). We assume that, as a consequence, the number being re-referred to the high-risk clinic increases by 15 per cent (from 9 to 24 per cent of the total) and a further 1 per cent become exceptional cases.

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In the ‘empowered patients’ model we again assume that the low-risk podiatry clinic closes, that most patients are transferred to the empowered patients model, but that a small proportion become high-risk or exceptional events. The first set of costs shows that both NHS and patient costs would be lower with reduced services.

Table 2 below shows the same proportions of the population allocated to different care models but with different estimates of costs. In particular we show a much increased ‘exceptional cases’ cost. With these cost estimates the ‘empowered patients’ model is cheaper than both traditional and reduced services.

5.5 Conclusions
The model allows us to use informed guesses on costs and to see the implications of our estimates. The balance of costs changes for given sets of assumptions. For example, with one set restricted access to low-risk podiatry services is cheaper than traditional care, but if the cost of ‘exceptional’ cases is increased disinvestment can become more expensive than a traditional podiatry clinic. With another set of assumptions empowered patient care is cheaper than reduced care. Information on the risk of ‘exceptional cases’ and their possible costs is needed.

<table>
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<th>Annual cost per case £</th>
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<td>Exceptional cases</td>
<td>1.2</td>
<td>900</td>
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</table>
We believe that the evidence does not yet provide clear implications for policy or practice. It is important, therefore, to have a mechanism and process to continue to collect further evidence and to encourage debate among all stakeholders. We have developed a website to facilitate that continuing debate: www.research.plymouth.ac.uk/podiatry. The menu is as follows:

- Welcome
- Objectives
- Older people’s views
- Evidence base
- Access criteria
- Innovative podiatry schemes
- Podiatry services in England
- Costs
- Discussion forum

Users will be able to see a summary of older people’s views as well as some relevant (anonymous) quotes, summaries of access criteria and innovative services, and individual details for each podiatry service. They can use the model (see section 5) to explore various care options.

One additional menu item that could be added in any future development is a link to other sources of advice, such as the availability of appropriate footwear.
7 Discussion and policy implications
Help the Aged commissioned this research from University College Northampton and the University of Plymouth to establish what evidence there was to support the anecdotal impression that many older people who need professional foot care are not receiving it and that access to NHS services for older people is extremely variable.

Primary health care services are fundamental to maintaining and improving health in later life and to enabling older people to remain mobile, independent and involved in their communities. But such services are often in short supply, and the costs associated with them can act as a barrier to many people.

Access to NHS podiatry services is one of the most frequently cited health-care concerns for older people in England. This is perhaps not surprising given that approximately two-thirds of older people have foot problems, and a quarter of those over 65 are not receiving any professional help, despite having a need for such a service.

There is evidence that in many areas access to NHS podiatry services is being subjected to ever more stringent eligibility criteria, making it increasingly difficult for those with low-level needs to obtain NHS care.

Access to community-based health care services is frequently the focus of a high degree of public concern and political interest. But the availability of NHS foot-care services has not received the same degree of attention as services such as dentistry, for example. All too often, it seems, foot-care services are seen as a low priority.

Help the Aged commissioned this research to address this problem and to raise the profile of the lack of availability of NHS podiatry services for older people, and the impact that this can have on an older person’s quality of life. It was also our intention to encourage primary care trusts to consider the wider costs associated with restricting access to NHS podiatry services for older people.

Keeping the feet healthy in later life is an essential part of maintaining independence. Yet the evidence in this research points to serious problems for older people who find it increasingly difficult to obtain NHS podiatry services, and who are left, instead, to make use of private podiatry services, to rely on the voluntary sector, or simply to get by on their own. The impact of disinvestment in NHS podiatry services appears to affect older people disproportionately, as they are more likely to need professional foot-care services than any other sector of the population.

It is our belief that failing to meet the basic, low-level foot health needs of older people is a false economy. We also maintain that the implications for older people, and in the longer term for the wider health community, are poorly understood.

Without doubt, the most shocking conclusion of this research is the sheer number of older people who need professional care but find it difficult to access an NHS podiatry service.

In considering access to services, it can be tempting to identify lack of resources as the underlying problem, but this research demonstrates that the issues are more complex than that.

Historically, podiatry services have been at the sharp end of the debate about what
qualifies as a health need as opposed to a social care need, especially since podiatry services were moved from local authority responsibility to the NHS in the mid-1970s. The debate has also had a significant impact on older people’s care across the board, with continuing disagreement about individual care packages, whose responsibility it is to meet the costs of care, and philosophical debates about the circumstances in which older people should be expected to contribute. This debate is however something of a red herring when it comes to older people who have a clear and indisputable need for a professional foot-care service: this is the responsibility of the NHS, which should provide appropriate services.

In the light of the findings of this research, Help the Aged would like to see action being taken on the following issues.

First, it is clear that serious problems exist concerning access to NHS podiatry services for older people, and that only limited work, at a local level, has been done to establish how best to ensure that older people’s needs for basic foot-care services can be met. Parallels can be drawn with what we see happening in social care services for older people, where a policy objective to help people to remain at home has resulted, perversely, in a decline in the number of households receiving home-care services. Within podiatry services, it is clear that moves away from treating priority groups, such as older people, towards a more needs-led service have resulted in many older people feeling let down by the NHS when they need it the most. Some of the innovative approaches to meeting particularly low-level foot care needs, which have been identified by this research, clearly have merit. However, they need to be part of an integrated care system for older people rather than simply a range of services designed to deal with the fallout of large numbers of older people from an NHS service which is being withdrawn. In many instances it seems that local voluntary-sector bodies are taking on responsibility for maintaining overall foot health in later life.

Secondly, this research has done much to encourage greater consideration of the wider costs associated with changing patterns of NHS provision to the wider health community and to the individual patients. The model that has been developed provides a useful starting point for NHS commissioners to begin to consider these factors, but more work is needed to gain a fuller insight into the true costs and benefits of NHS podiatry services for older people.

Thirdly, the impact of disinvestment in NHS podiatry services appears to affect older people disproportionately. Older people can find it difficult to meet the costs of private services. In addition, self-care is often more difficult for older people. As the research demonstrates, almost two-thirds of older people have difficulty cutting their own toenails. The impact of disinvestment is therefore an example of indirect discrimination against older people, with much wider implications for older people, their families and other agencies, including the voluntary sector.

Finally, this research has demonstrated the strength of feeling among older people about podiatry services, and the options available to them to meet low-level foot health needs. It is imperative that local NHS organisations engage with older people about NHS podiatry services and the way in which low-level needs will be met if stricter eligibility criteria are introduced. The views and experiences of older people at a local level must inform the design and configuration of local NHS podiatry services.
7.2 Help the Aged recommendations

For Government

- Government must take urgent steps to improve the organisation and delivery of NHS podiatry services and to reverse the decline in the availability of NHS services to meet low-level foot health needs among older people.

- Government must ensure that primary care trusts are allocated sufficient resources to deliver a comprehensive and timely service to older patients who have a need for professional foot-care services.

- Government should encourage and support the development of services to meet low-level foot health needs among older people.

- Foot health in older age should be seen as an urgent public health issue which is key to improving health and promoting greater independence in later life.

- The Government should ask the National Institute for Health and Clinical Excellence to develop guidelines on podiatry and foot health in later life to provide a national standard for foot care for older people.

- Podiatry services must remain a core, community-based NHS service.

- Older people should have a right to a podiatric assessment as part of a comprehensive assessment of care needs.

- Government should ensure that there is equity in the delivery of NHS podiatry services. Older people with a clinical need for podiatric care should be able to receive a high-quality NHS service wherever they may live.

- Waiting times for NHS foot health assessments and treatment, and the length of time between appointments, must be reduced.

- Government must ensure that older people are discharged from NHS podiatry services only after the impact of such withdrawal on quality of life, independence and mobility has been explored and alternative care and support services made available where necessary.

- Government needs to do more to encourage partnerships across the NHS, social care services and the voluntary sector in meeting foot health needs. The forthcoming White Papers on adult social care and primary care should pay particular attention to encouraging care communities to meet low-level foot-health needs.

- Government should consider ways to tackle the difficulties faced by older people on limited incomes who struggle to meet the costs of private podiatry provision. The development of individual budgets in health and social care should aim to ensure that assessed foot-health needs can be met promptly and appropriately, and that the personal cost to the individual can be minimised.

For regulatory and professional bodies

- Frontline health and social care staff should be trained to consider foot health as an integral part of health and well-being in older age.

- Training and development should be provided for podiatrists to ensure that they understand the significance of foot health within the wider context of support for older people.

- Foot-care assistants and volunteers used to meet low-level foot-health needs among older people must receive adequate and appropriate training in order that older people can have confidence in the services being provided.
The Healthcare Commission should undertake a review of the practice of discharging older patients from NHS podiatry services to establish the consequences to the wider healthcare system and to the individual patients.

The National Patient Safety Agency should investigate the patient safety implications of discharging older patients from NHS podiatry services.

For podiatrists and other foot-care professionals

- Podiatrists should provide training and support for other care workers in foot health to enable them to consider foot health as part of the wider assessment of an older person’s needs.
- Podiatrists must be encouraged to provide proper support for care homes and the foot-health needs of residents.
- Podiatrists and NHS podiatry managers should provide support to voluntary-sector initiatives that are meeting low-level foot-care needs that are unavailable to older people in many areas.

For the NHS and social services authorities

- Local NHS organisations must ensure that eligibility criteria used by the NHS to ration access to NHS podiatry services do not discriminate against older people needing foot-care interventions.
- In determining a patient’s ability to provide self-care, the NHS must consider an older person’s potential limited mobility and flexibility, and should discuss what support the patient may need in order to do so.
- The reduction in budgets available for NHS podiatry services must be examined with a full understanding of the wider cost implications to other parts of the healthcare system, social care services, the voluntary sector and the individual patients.
- Assessing an older person’s foot health needs and their ability to look after their own feet should be an integral part of the delivery of the Single Assessment Process.
- Podiatric services for older people must be commissioned on the basis of a full understanding of need among older people with full consideration of the wider costs to the health and social care system of discharging patients from NHS provision.
- Where the voluntary sector is providing low-level foot-care services, such as nail-cutting, for patients with non-pathological nails, the NHS and social care authorities must ensure that there are appropriate referral pathways to enable patients with a clinical need to be identified and treated accordingly.
- Local NHS bodies should critically examine whether the discharge of patients from NHS podiatry services is justifiable and must be able to demonstrate that it does not discriminate against older people.
- Primary care trusts and strategic health authorities should be encouraged to share information on innovative models in use locally and best practice in meeting the demand for foot-care services among older people.
- Alternative means of meeting low-level foot health needs, such as nail-cutting, must not patronise older patients, and must adequately take account of possible limited mobility. Older people must be involved in the planning of such services to ensure that these services meet their expectations and needs.
For research

- More research is needed to further develop the model that enables local NHS commissioners to consider the implications of changes to NHS podiatry services, which includes mechanisms for assessing the cost to the wider health and care system, and to the individual patient.

- Local NHS commissioners need to undertake further local-level research to establish the level of unmet need for foot-care services among older people.

- The withdrawal of low-risk podiatry services may have implications for patient safety but there is a lack of evidence about its wider economic consequences. More research is needed to identify the frequency and consequences of ‘exceptional events’.

- Further comparative research is needed into the different models of providing low-level foot-care services to examine the cost-effectiveness of alternative treatment programmes.

- Further work is needed to understand the foot-health needs of those older people who are isolated, housebound, or living in institutional care.

- Research is needed to quantify the true level of unmet need for foot-care services among older people, to inform commissioning of services at local level.

- Further research is needed to thoroughly investigate models of innovative practice in meeting low-level foot-care needs among older people, and to establish the true cost and benefit of such approaches.

- Further research is needed to establish effective means of meeting low-level foot-health needs which adequately meet older people’s expectations for such services.
The reported research studies on the prevalence of foot conditions (which can be accessed via the website www.research.plymouth.ac.uk/podiatry) vary enormously in terms of their methodology, the populations studied and their geographical location. This makes a true meta-analysis of the data impossible and so the available information has been synthesised and interpreted to arrive at a reasonable consensus of the estimated prevalence.

1.1 Conditions requiring professional podiatric treatment
A panel of experienced podiatry service managers concluded that the following conditions required professional podiatric care:

- corns and calluses
- plantar neuroma
- ganglion/bursa
- fissure
- abrasions/trauma
- symptomatic nail pathology
- ulceration
- tissue breakdown
- infection
- neoplasm
- inflammation
- cellulitis
- gangrene
- Charcot joint.

Professional podiatric treatment for conditions such as asymptomatic nail problems, skin fungal infection and asymptomatic foot deformities was not considered essential as these could be treated by other health and social care staff or by self-care. However, professional podiatric treatment would be indicated in the presence of increasing discomfort or pain in these conditions, or the addition of a relevant medical condition from the following list:

- oedema/edema
- rheumatoid arthritis
- osteoarthritis
- diabetes
- hypertension (with relevant complications)
- peripheral vascular disease/peripheral arterial disease
- cardiovascular conditions
- malnutrition
- compromised immunity
- medication factors
- scleroderma
- lupus
- arteritis
- gout
- Raynaud’s disease
- Charcot Marie tooth syndrome
- cerebral vascular accident.
1.2 Under-recognition of foot conditions by non-professionals

One of the major differences in the reported studies is between those that use clinicians to examine the feet and make diagnoses and those that use self-report by the research sample. There is general agreement that self-report underestimates the presence of most foot conditions and hence prevalences reported by studies using professional assessment are higher than those using self-assessment. From one major study that used both methods of assessment (Cartwright and Henderson, 1986), the ratio of foot problems identified by podiatrists compared to foot problems identified by self-report was 1.61. In other words, the prevalence of foot problems was 60 per cent higher when assessed by podiatrists than by self-report.

Garrow et al (2004) measured the sensitivity and specificity rates for some common foot problems from data derived from the measure of agreement or disagreement in the individual diagnoses made by the patient and the clinician. They estimate the rate of agreement about the presence of corns and callosities to be 47 per cent, with a 91 per cent agreement about their absence. However, in order to compare with the previous estimate, which was arrived at by looking at overall prevalence rates rather than on an individual basis, it is necessary to work backwards to find the overall prevalence rates reported by patients and clinicians. They report that 936 of 3,047 patients reported corns and calluses. Applying the figures for sensitivity and specificity gives 1,737 clinician diagnoses corns and calluses from this sample. This gives a ratio of 1.86 for the clinician: self-assessed prevalence rates. This is higher than the 1.61 calculated from Cartwright and Henderson (1986) but it should be noted that this was a general rate for ‘foot problems’ whereas that calculated from Garrow was for corns and calluses. Garrow reports different sensitivity and specificity rates for other foot problems (although none of the other conditions he reports is defined as essential for professional care by the panel of podiatry managers for this project).

1.3 Total and unmet need in the UK population aged 65 and over

Surveys of the general population aged 65 and over should enable estimates to be made of the prevalence of conditions needing professional foot care. Applying these rates to demographic data for the UK will produce estimates of the number of people in this age group requiring podiatric treatment. Data on the proportion of those with foot problems who are receiving professional care, and Department of Health statistics for the numbers of episodes of podiatric care, can then be used to estimate the discrepancy between those needing care and those receiving it.

1.4 Estimates of prevalence of conditions requiring podiatric care

Cartwright and Henderson (1986) estimate that 4 per cent of people aged 65 years and over have major foot problems, 22 per cent have moderate problems and 58 per cent have minor problems. Whereas it is likely that those conditions classified as major and moderate would require professional care, the minor problem category would contain conditions for which professional care would not be considered essential. Within the list of conditions requiring professional care given above, the most prevalent condition which might be considered as a minor foot problem is corns and calluses. It is reasonable therefore to estimate the total need by combining the prevalence for major and moderate conditions with those for corns and calluses. In doing this, allowance must be made for double counting.
can be assumed that the major and moderate categories are mutually exclusive, it is likely that people in each category may also have corns and calluses.

Most studies reported in the literature survey give data on the prevalence of corns and/or calluses. However, some report these as a combined category, others as separate prevalences. In addition, the detailed study by Cartwright and Henderson (1986) gives the rates for corns and calluses broken down by their position on the foot and not as an overall prevalence. The authors also separate out corns from calluses on the plantar surface of the foot, but combine them elsewhere. In order to compare estimates from different studies it was necessary to calculate an estimated combined prevalence for corns/calluses. This was done by using a statistical technique to combine the probabilities of at least one of several events occurring. It adds together the probabilities of each event occurring separately but then subtracts the probabilities of each possible combination of events happening together, to prevent double counting.

There is a problem with this technique, in that it assumes that each event is independent from the others. This is not likely to be the case with corns and calluses because of the influence of poorly-fitting footwear in the development of these conditions. Intuitively, it seems likely that a person having a callous in one place on the foot is more likely to also have one in another location than would be expected by chance alone. Although this will lead to some inaccuracies in the calculations of the combined prevalence rates for corns and calluses, they are probably small compared to the overall variations in the data reported in the literature.

Using this technique, the following estimates of prevalence for corns/calluses were calculated from the published literature of surveys of the general population aged 65 and over. Where the study used self-report, the prevalence was multiplied by 1.86 to equate it to the clinician-reported prevalences (see above).

A weighted average of these results (which gives more weight to estimates derived from studies with larger samples) gives an overall estimate of the prevalence of corns/calluses in people aged 65 years and over of 58 per cent (to the nearest whole number).

### 1.5 Calculation of total need for professional podiatric care

Using the estimated prevalence for major and moderate foot problems of four per cent and 22 per cent respectively (Cartwright and Henderson, 1986) and

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<th>Age group</th>
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combining them with the estimated prevalence for corns/calluses (allowing for double counting as before) gives an estimated total need for professional podiatric care for the population aged 65 and over of 69 per cent. This estimate does not include those without conditions categorised as needing professional care but with additional medical problems or pain, who should also be seen by professionals. This additional element is very difficult to estimate from existing literature and so the remainder of this work will use the estimated total need of 69 per cent, in the knowledge that this may be an underestimate.

1.6 Calculation of unmet need for professional podiatric care

Garrow et al (2004) report that 40.5 per cent of their sample who were aged 65 and over had received professional foot care in the past six months.

The Department of Health statistics for NHS podiatric care are reported yearly in the KT23 returns (Department of Health, 2003), which give the number of new episodes of podiatry care each year (initial contacts) and the total number of different people seen by podiatry service providers each year (first contacts). Each is broken down by health trust and the initial contact data is broken down by age group. This data provides the information that 474,000 people aged 65 years and over had a ‘new episode of care’ in the year 2002–3.

A new episode of care (initial contact) can be viewed as a patient starting a new course of treatment, usually referred to the podiatry department from a hospital, GP or other health service professional. Continuing treatment for the same condition qualifies as a new episode of care only if there was a break of more than six months since the last contact. First contact is therefore more informative when trying to estimate the total number of people currently receiving treatment, but unfortunately these statistics are not broken down by age group. The overall ratio of first, initial contacts for 2002–3 was 2.62. Applying this to the number of new episodes of care would give an estimated number of first contacts for those aged 65 years and over of nearly 1 per 250,000. However, this assumes that the average length of an episode of care for an older person is the same as that for the whole population – nearly 60 per cent of all new episodes of care are for patients aged 65 years and over – and so it may be argued that the overall averages are weighted in favour of this age group, but accurate data on this are not available.

The total number of people aged 65 years and over in England in mid-2002 was 7,880,600 (Office for National Statistics, 2004). The Department of Health statistics would therefore suggest that approximately 16 per cent of older people received NHS podiatry treatment in England in 2002–3.

The ratio of first, initial contacts differs widely across the UK, with NHS trusts reporting ratios ranging from 1.0 to 35.0 (although all but three trusts fell into the 1.0 to 8.0 range). This probably reflects the differing access criteria (and therefore differing caseloads) of the various trusts, as well as the age profile of their local population.

Garrow and Henderson (2004) worked with two general practices in the north-west of England. The average first, initial contact ratio for Cheshire and Merseyside for 2002–3 was 2.3, which is not wildly different from the national average. However, their study showed that 40.5 per cent of their sample had received professional care in the last six
months. Although most of this professional care was delivered by a podiatrist, the source of this care (NHS or private) was not reported.

A study by Harvey et al (1997) reported that, in their sample of people aged 60 years and over, 40 per cent of those who were considered to need professional podiatric care were not receiving it. If we take the previously calculated estimate of 69 per cent of the older population needing professional podiatric care, then Harvey suggests that there is an unmet need of about 28 per cent of this population.

We therefore have three different estimates of unmet need, arising from three different sources of data. Assuming a total need for professional podiatric care of 69 per cent of the population, Garrow et al’s data suggest that about 20 per cent of the population are not receiving professional care, Harvey suggests 28 per cent and the Department of Health statistics may be interpreted as indicating that about 53 per cent of the older population are not receiving the professional care they need from the NHS.

Although it must be emphasised that these statistics should be interpreted with extreme caution as official statistics are not available, it seems reasonable to estimate that about 25 per cent of the older population need professional foot care and are not receiving it from any source, and a further 25 per cent would appear to be receiving professional care from sources other than the NHS.

1.7 Estimates of total podiatry workforce required

The total number of first podiatry contacts (number of different patients seen that year) for England in 2002–3 was 2,161,000. In September 2003 3,807 qualified podiatrists were employed by the NHS (Hansard, 2004). This gives an average of 568 patients per podiatrist, or 1 podiatrist per 2,000 population aged 65 and over.

If the NHS were to expand its services to those older people who need professional care but are not getting it from any source, it would need to treat approximately 1,970,000 extra people, which, at current staffing levels, would require an additional 3,500 podiatrists. This would nearly double the size of the current service.
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4. In 2001 David Milns surveyed 150 service managers who were members of the Society of Chiropodists and Podiatrists. It was estimated that there may have been 200 at that time. In November 2004 the Society listed 139 members


6. Personal contact (Lynda Parkinson, Harrogate Healthcare NHS Trust)

7. Personal contact (Andrée Borrett, North Lincolnshire PCT)

8. Personal contact (Roger Whittaker, Cannock Chase PCT)

9. Personal contact (Mike Townson, Portsmouth PCT)

10. Personal contact (Julie Garrard, Mid Sussex PCT)

11. Personal contact (Julie Garrard, Mid Sussex PCT)

12. Personal contact (David Liddle, Durham and Chester-le-Street PCT)

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37. Personal contact (Penny Spring, Assistant Director of Public Health, Newark and Sherwood PCT)

Foot care is especially important for older people, because if their feet develop problems their mobility can be affected – and, hence, their independence and their emotional well-being. However, cutbacks in services mean that free podiatry care on the NHS is now restricted, in many parts of England, to treatment of more serious conditions or to patients at higher risk. Those older people who cannot afford private podiatry treatment struggle to look after their own feet, at an age when bending or poor sight can make this difficult, or to find someone willing and able to do it for them.

One in four people aged over 65 needs podiatric care but is not receiving it. This report by experts from the University of Plymouth and University College Northampton looks at the scale of unmet need among the older population and the likely longer-term outcome of not providing low-level podiatric services. It also suggests some innovative and cost-effective alternatives to traditional service delivery that could offer a way forward.