RHEUMATOLOGY ADVANCES IN PRACTICE

Rheumatology Advances in Practice 2021;0:1–12
doi:10.1093/rap/rkab006
Advance Access Publication 28 January 2021

Original article

A clinical audit into the adherence of foot health management standards of rheumatoid arthritis compared with the foot health management standards of diabetes mellitus in North-East London

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Abstract

Objectives RA has an affinity for smaller joints, thus its effect on the foot/ankle is widely known. Despite this, there is lack of adherence to foot management standards by podiatrists. This research aimed to audit the adherence to these standards and compare them with well-established adherence to management standards in the diabetic foot.

Methods In this clinical audit, data were obtained via six National Health Service (NHS) podiatry departments in North-East London on service provision, management, treatment and professional development on both RA and diabetic foot health via foot management clinical audit tools. Descriptive analyses were conducted and analysed to identify patterns and trends, with set standard compliance conditions calculated on the Net Promotor Score (NPS) metric to allow for multi-comparison.

Results All areas of RA foot health management were found to have poor compliance when compared with diabetes foot health management. When using NPS, no trust audited met the majority of foot health standards in RA, with only two having a positive score (meeting the minimum standards), compared with all trusts posting a positive NPS on diabetes foot health standards.

Conclusion Our results indicate that poor compliance to RA foot health standards is prevalent across the audited region and might be resulting in worsening foot outcomes despite a paradigm shift in other areas of RA management. Enhanced training and knowledge are required for better adherence to the standards set out and to improve foot health management in RA.

Key words: rheumatoid arthritis, foot health, podiatry, standard adherence, audit

CLINICAL SCIENCE

Key messages

- Adherence to RA foot guidelines was found to be poor owing to limited evidence base.
- More awareness is required on foot health standards for RA in both podiatry and rheumatology.
- There is a need for a universally standardized assessment for the RA foot.

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Submitted 12 October 2020; accepted 18 January 2021

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Introduction

Approximately 90% of patients with RA report foot/ankle complaints at least once in their lifetime [1], with development and severity increasing with the duration of active disease [2, 3]. Despite new criteria and evidence

that a treat-to-target approach is best for achieving low disease activity and clinical remission, this paradigm has not been shown to be able to manage foot/ankle disease effectively [4, 5].

Dedicated podiatry services that include RA are scarce, despite the high levels of reported pain and disability, even during clinical remission [4]. During the period 2006–2016, access by rheumatology departments to podiatry increased from 18% [6] to 48% [7] with the help of several national guidelines supporting the integration of podiatry into rheumatology departments [8, 9] but their inclusion into podiatry commissioning is still behind that of diabetes. Several reasons exist for this exclusion, such as educational inequality in rheumatic disease training [10], lack of awareness of the role of podiatry [11] and lack of specialist or advanced podiatrists in rheumatology [12]. Adherence to the four pillars of clinical standards (service provision, assessment, management and professional development) might help in promoting the inclusion of the RA foot into podiatry services through a knowledge-based sustainable workforce.

Despite the known effect of RA on foot/ankle health and the limited foot services available, guidelines in rheumatology are focused mainly on medication management rather than issues pertaining to extra-articular features outside the major organs. Instead, many guidelines for these are focused on when issues occur rather than before [13], despite podiatry demonstrating greater improvement in pain and disability compared with those lacking access to podiatry [14, 15]. Only one study has been published on the appraisal of guidelines for foot/ankle issues in RA [16], and it found a dearth of high-quality guideline research, with the majority of guidelines falling under ‘good clinical practice’. This should be compared with diabetes foot health, where National Institute for Health and Care Excellence (NICE)-endorsed guidelines are required to be implemented and have gone through more rigour in terms of research. At present, there are 221 specialist diabetes foot care services in England and Wales [17], whereas no figure is available for RA specialist foot clinics. Considering that both RA and diabetes have high affinity to the foot/ankle, causing functional changes, vascular comprise and an increase in foot ulceration, there exist inequalities within the care given to the lower limb with respect to the disease. Podiatry and diabetes are interwoven owing to the relationship of diabetes with ulceration and limb loss [18], but the relationship of RA to the foot/ankle is weaker. Considering the difference in commissioning of services with each condition, the aim of this study was to compare the clinical adherence to foot health standards between RA and diabetes within a defined region in London.

Methods

Design

The motivation behind this audit was the lead author, in their role as a rheumatology podiatrist, finding that there was very little guidance in terms of management guidelines and service provision of the RA foot. This indicated a need for a project on how foot health services are dealing with the RA foot in terms of adherence to current guidelines and compared with adherence to guidelines in the diabetic foot.

All National Health Service (NHS)-based podiatry services within the North-East London region ($n = 8$) were invited to participate. The sector is spread over nine London boroughs with a population of more than ~1.6 million. Each NHS trust has its own foot health service(s), but each trust offers a different podiatry service in order to meet the needs of the community in which it resides. Currently, RA foot management is not well established under NICE owing to a lack of high-quality guidance. Therefore, local/national interest groups, such as the British Society for Rheumatology, College of Podiatry, Podiatric Rheumatic Care Association and Arthritis and Musculoskeletal Alliance are used to establish best practice.

Data were collected prospectively on each service via already developed audit tools on both RA and diabetes foot standards. The audit tool was completed by the lead podiatrist for each service, and all were approached at the same time. Informed consent was gained if a completed audit tool was sent back to the lead author. This occurred over a 6 week period starting in October 2019 and ending in mid-November 2019, with reminders being sent out every 2 weeks to ensure maximum participation. This project was deemed low risk and was reviewed by the committee for Low Risk Ethical Procedures at the Faculty of Life Science and Education, University of South Wales, who granted ethical approval (reference 19CJ1001LR) and the local NHS audit committee. This study was in accordance with the Declaration of Helsinki. Given that each lead podiatrist had to email the lead author and assign their service to each data collection tool, anonymity was not possible owing to the need to analyse the data by trust; however, it was preserved in the analysis and presentation by allocating letters to each trust.

Data collection

The audit tools had 31 questions (34 in diabetes) (Table 1) divided into the four pillars of clinical standards. The questions used were developed in conjunction with clinical standards in their respective fields and used a combination of evidence base and expert opinion where evidence base was not available. The RA foot health audit tool (Supplementary Data S1, available at *Rheumatology Advances in Practice* online) was developed by the North West Clinical Effectiveness Group for Rheumatology (NWCEG) [19] and builds on several UK-based clinical standards in RA foot health. Currently, this tool has not been used extensively, and thus its validity is unknown. Owing to time constraints, validity testing was not possible, and it is the only known audit tool in UK clinical standards of RA foot health. No changes occurred to this document, and only NICE

Table 1 Audit standard questions criterion

RA	Diabetes mellitus
Service provision	
A team of podiatrists with knowledge and skill in foot management of people with RA	A team of podiatrists with knowledge and skill in foot management of people with diabetes mellitus
Dedicated input in the rheumatology MDT	Dedicated input in the diabetes MDT
Annual review of those with identified foot problems	Annual review of those with identified foot problems (or earlier of increased or high risk via diabetic foot assessment)
The facility to see patients within 6 weeks of RA diagnosis	The facility to see patients within 2–4 weeks of those who are at high risk of developing diabetic foot problems
A mechanism for urgent referral for surgery	Referral to MDT foot service within one working day for those with limb/life-threatening diabetic foot problems
A mechanism for provision of foot orthoses if indicated	Urgent access to offloading non-removable device or removable offloading device (if non-removable device is contraindicated)
Clinics are accessible to people with mobility issues	Clinics are accessible to people with mobility issues or service adapts to those who are housebound
Patient assessment results are communicated to the referrer and patient's consultant	Patient assessment results are communicated to the referrer and patient's consultant
Immediate access for foot care for those with urgent problems	A mechanism for urgent request from microbiology for suspected infection for diabetic foot problems
Immediate access to the patient's rheumatologist for urgent problems	Named consultant to be accountable for overall care of the person with diabetic foot problem
Direct referral to radiology	Direct referral to radiology
Direct referral for blood tests	A mechanism for urgent referral for antibiotic therapy
	Ability to refer those with increased or high risk of developing diabetic foot problems to foot protection service
	Podiatrist leads the foot protection service
Assessment	
Assessment of foot pain is carried out and monitored at each visit	Each person with diabetes mellitus has a diabetic foot assessment and is categorized according to its findings
Assessment of suitability of footwear is carried out at each visit	Assessment of suitability of footwear is carried out at each visit
A full vascular assessment is carried out at baseline and annually	Assessment of lower limb ischaemia via palpable pulses/intermittent claudication/rest pain is carried out annually
A full neurological assessment is carried out at baseline and annually	Assessment of neuropathy (using 10 g monofilament) is carried out annually or earlier if required
A full lower limb structure/functional examination is carried out at baseline and annually	A full lower limb structure/functional examination is carried out at baseline and annually
Assessment of cardiovascular risk factors is carried out at baseline and annually	Assessment of cardiovascular risk factors is carried out at baseline and annually
Foot health status is evaluated at baseline and annually (Salford Rheumatoid Arthritis Foot Evaluation or Foot Impairment Score)	Use of ankle brachial pressure index in those with non-healing ulcers or suspected peripheral arterial disease
Assessment of lifestyle/social factors is carried out at baseline and annually	Assessment of lifestyle/social factors is carried out at baseline and annually
Management	
Patients are provided with a negotiated care plan	Patients are provided with a negotiated care plan
Information is provided on lifestyle changes	Information is provided on lifestyle changes
Information is provided on self-management	Information is provided on self-management of basic foot care and its importance
Mechanisms ensure that management choices are made in accordance with evidence/guidelines	Mechanisms ensure that management choices are made in accordance with evidence/guidelines
Patients are given informed choice of non-surgical/surgical options for foot health management	Information is provided on importance of good blood glucose control
Advice and negotiated guidance on appropriate for footwear for their needs	Advice and negotiated guidance on appropriate for footwear for their needs or referral for bespoke footwear
Nail surgery is carried out in liaison with patient's consultant	Information is provided on who to contact in foot emergencies
	Urgent referral to MDT foot service or foot protection team in those with active foot ulceration or suspected foot ulceration

(continued)

Table 1 Continued

RA	Diabetes mellitus
Tailored education, information and advice, with signposting to support services and organizations	
Callus debridement is considered only when appropriate pressure relief is in place	Use of sharp debridement or other forms of debridement by trained professionals, taking into account expertise
	Antibiotic guidelines covering pathways for managing diabetic foot infections
Professional development	
Education is provided to the MDT on foot health, podiatrist's role/referral	Education is provided to the MDT on foot health, podiatrist's role/referral
Clinical specialist/lead has undertaken postgraduate training in rheumatology	Clinical specialist/lead has undertaken postgraduate training in diabetes/vascular health
	Regular reviews of treatment and patient outcomes in line with National Diabetes Foot Care Audit

MDT: multi-disciplinary team.

guidelines on adult RA management were updated to reflect current guidance [9].

NICE guidance on the foot in diabetes [20] has a validated audit tool to see if services are meeting NICE standards in the area (Supplementary Data S2, available at *Rheumatology Advances in Practice* online) and is a core part of the NHS National Diabetes Foot Care Audit [17]. To ensure easier data completion and subsequent analysis, this tool was adapted in appearance and the questions placed into the same four clinical standard pillars as the RA tool. It was expected that if the audit tool is being used in nationwide auditing of foot management in diabetes, its validity and research base is of high quality.

These questions had three possible answers: red (no significant evidence available of standard being met), amber (some evidence available of standard being met) and green (full evidence of standard being met). Each question within the audit tool was to be answered best to what each standard had evidence for in each service. The evidence for each standard was not requested, because the audit was examining only adherence. Feedback of the audit was presented to the lead researcher's local audit committee and though regional podiatry service meetings (that involved the participating services).

Audit standards

Audit standards (AS) were determined a priori based on several different clinical standards for RA [8, 9, 19, 21] and diabetes [20, 22] (Table 2).

Statistical analysis

Data were analysed using descriptive statistics. This allowed for easier comparison of the data and better visual interpretation. The adherence with each AS was assessed by calculating a score based on the Net Promoter Score (NPS) [23]. The NPS was calculated as follows:

Percentage of Green Answers − percentage of Red Answers × 100 = NPS.

Given that there is no set standard on what score an NPS holds in AS adherence, in this project we devised an adherence score (Table 3). The RA Sufficiency Score (RASS) and DiAbetes Sufficiency Score (DASS) were made to display adherence scores and displayed as percentages. The NPS can be displayed in both positive and negative figures.

Results

Service demographics

Data were received and entered for six NHS-based podiatry services based in North-East London. The two services that did not sent back any data gave no reason for their exclusion. No other service demographics were obtained. Standard adherence answers from each trust for RA and diabetes mellitus can be found in Figs 1 and 2, respectively.

Service provision

RA foot service provision was poor in all trusts, with only 43% meeting all standards set out. No trust had dedicated input into the rheumatology multi-disciplinary team (MDT), and only one had the facility to see people diagnosed with RA within 6 weeks of initial diagnosis. Five trusts had immediate access for those with urgent foot issues (such as ulceration), but no trust had access to a rheumatology consultant for urgent issues or access to blood tests. Diabetes foot service provision found that 74% of trusts were meeting the standards set out; however, no trust audited had 100% adherence, thus no trust in the region was meeting RA and/or diabetes foot service provision. All trusts audited did have access to urgent antibiotic therapy and radiology referrals when required, and in five of six trusts the foot protection service was led by a podiatrist.

Table 2 Audit standards

RA foot standards	Diabetes mellitus foot standards
ARMA inflammatory arthritis standards Musculoskeletal Foot Health Standards NWCEG Rheumatology podiatry guidelines NICE NG100 – RA in adults: management	NICE NG19 – Diabetic foot problems: prevention and management NICE CG147 – Peripheral arterial disease: diagnosis and management

ARMA: Arthritis and Musculoskeletal Alliance; NICE: National Institute for Health and Care Excellence.

Table 3 Adherence score key

Index Score	Meaning
<49	Not meeting current national standards; major improvement required
50–79	Meeting majority of current national standards; minor improvement required
>80	Meeting all current national standards

Foot assessment

The results showed that all standards were not being met, with only 25% of trusts meeting RA standards in foot assessment and 31% in diabetes foot management. Almost half (46%) of trusts audited did not meet any RA foot assessment standards, with none evaluating foot health status via RA-specific foot outcome measures and baseline neurological foot evaluation. The best-preforming assessment standard was five trusts carrying out basic functional assessment of the foot/ankle; one trust stated they met this standard in part.

This contrasts with the diabetes arm, where only one trust met the standard on functional assessment of foot/ankle. Baseline diabetic foot assessment and risk stratification, including vascular and neurological assessment, was met in all trusts. However, no trust was recorded to be carrying out a baseline cardiovascular risk assessment, which was similar to findings in RA.

Management

Five of six trusts (83%) provided information on self-management of RA foot issues, but only three trusts tailored these specifically to each patient. Of these three trusts, one provided a negotiated care plan, and one trust ensured that management choices were made in accordance with evidence. For diabetes, all trusts met foot emergency contacts standards and importance of glucose control (met or partly met). As for RA, diabetes management choices were in line with evidence/guidelines, where only two trusts met this standard in full and only one trust had provided patients with a negotiated care plan. A more positive finding was that all trusts met standards in terms of guidance on self-management in both RA and diabetes.

Professional development

Four trusts (two met this full standard, another two met it in part) offered RA foot health education to their MDT, and another trust had a podiatrist who had undertaken some form of postgraduate training in rheumatology. In contrast to diabetes, where all trusts offered foot education to the diabetes MDT and four trusts had podiatrists who had completed postgraduate training in diabetes/vascular, two trusts had answered 'amber', thus it is assumed that members of these trusts might be in the process of completing postgraduate training in these areas.

Adherence scores

Adherence scores were created via the NPS metric and displayed as RASS and DASS via the designated score (Table 3). No trust audited achieved a score of >80 or even a score of >50 in terms of overall RA foot standard adherence (Fig. 3). The mean RASS was 1.6 and median was −8, demonstrating poor adherence to the standards set out across all trusts. Only two trusts achieved a positive RASS (the highest being 32), meaning that they were meeting some standards within the pillars, but not all.

Within the diabetes arm, no trust scored >80, but five of six trusts scored >50, implying that only minor improvements are required to meet current national guidelines. The mean DASS score was 62 and the median 66.5. The highest reported DASS was 74 from two trusts, with one trust scoring 36, where major improvement is required (Fig. 3).

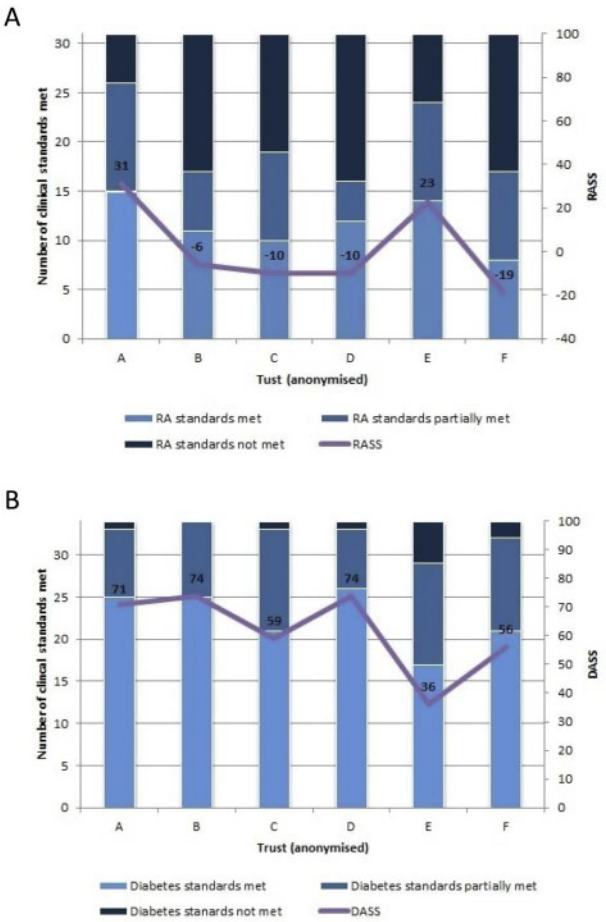
Discussion

In this the first known audit of RA national foot standards, with a comparison to diabetes national foot standards in the UK; adherence to RA foot standards did not meet current recommendations [8, 9, 19, 21], whereas diabetes foot standard adherence was in line with current recommendations [20, 22]. Our most important finding was that no trusts met adherence scores for RA foot standards, with only two trusts showing a positive RASS. This audit could not ascertain why this had occurred, but reasons could include poor knowledge of current standards, poor application of standards into practice (owing to many of the RA foot guidelines having poor methodology rigour), limited training in the area of

Fig. 1 Adherence to RA foot clinical standards across all audited trusts

FIG. 2 Adherence to diabetes foot clinical standards across all audited trusts

Fig. 3 Trust adherence to RA and diabetes mellitus foot health standards



Trust adherence to RA (**A**) and diabetes mellitus (**B**) foot health standards and comparison of this with their compliance score (RASS or DASS). DASS: DiAbetes Sufficiency Score; RASS: RA Sufficiency Score

RA foot health and possible inequality in NHS-based foot service provision, whereby disease overrides complaint.

NHS-based service provision and its subsequent service delivery are based on a model of care, which is a framework ensuring that patient-centred care is the focus of commissioners and health partnerships [24]. In this audit, it is more evident within diabetes that the model of care is being implemented, because standards were met as shown in wider audits conducted into diabetes foot health [17].

This finding is not reflected in RA foot provision, in that only 43% of audited trusts met service provision standards; however, no trust audited met all standards as set out in this pillar. Only one trust had the facility to assess patients within 6 weeks of initial RA diagnosis, which is recommended by arthritis-based associations [8, 21]. However, there are no data to support that earlier podiatric involvement lessens foot disability/pain [25, 26], although it has been shown to lessen deformity. The only known audit published on RA foot health service provision in Northern Ireland [27] found that only 29% of people with a diagnosed inflammatory arthritis had an initial foot assessment within 3 months; but these data were obtained retrospectively and included both PsA and JIA, whereas the present study focused on RA and analysed data from a management perspective.

No trust audited had dedicated input into the rheumatology MDT or access to a rheumatologist for urgent issues, reflecting the current literature. In UK-wide studies on the variation in composition of MDTs, inclusion of podiatry in the MDT within London NHS trusts ranged from 32% [28, 29] to 48% [7]. The reasons for this have not yet been explored, but it can be related to current contracts for rheumatology under NHS England [30], which have excluded podiatry, and thus commissioning groups are not required to fund specific posts and it is up to individual rheumatology services to include podiatry within their team. This literature also demonstrates a

lack of coherence and collaboration between research, rheumatology services and commissioning groups, resulting in worsening foot/ankle outcomes in RA.

It is thought that diabetes foot service provision is being met more owing to attractive payment tariffs to carry out more diabetic foot assessments, in addition to the need for commissioners and providers to enact NICE guidelines and thus more focus on the foot in diabetes. All these can lead to improved service provision; however, it is not examined further within the present study. In this study, we found high levels (74%) of adherence to service provision guidelines, including five of six trusts having a podiatrist to lead their foot protection service, which is a cornerstone of diabetic foot management [20].

Assessment of the RA foot was the most underperforming area of the audit, although both RA and diabetes are known to affect the foot/ankle more than other chronic diseases. This is reflected across the world [11, 31], indicating a global issue rather than only a regional one. There is no universally accepted RA foot assessment proforma (unlike in diabetes, where a proforma and risk stratification exist), which often results in inadequate or varied assessment across different sites. Of audited trusts, 53% were carrying out a basic RA risk foot assessment (lower limb vascular, neurological and biomechanical assessment), but no trust carried out the neurological aspect. Similar results were found in Northern Ireland [27], where 39–57% of patients with an inflammatory arthritis received baseline neurological and vascular assessment, although individual scores for each assessment were not provided. Another finding was that no trust carried out RA foot-specific disease activity/outcome measures; the Foot Impact Scale and Salford Arthritis Foot Evaluation are the most commonly used in RA foot outcomes [19]. Owing to the complex nature of the RA disease process and absence of a DAS, appropriate disease activity in the foot/ankle at the time of this audit was not present. Recently, the RA Foot Disease Activity Index-5 (RADAI-F5) [32] was developed by a team in Glasgow specifically for measuring disease activity in the foot/ankle in people with RA. In their validation study of RADAI-F5, they found consistent associations between this tool and the Foot Impact Scale, DAS-28 and a modified RA disease activity index, demonstrating a reliable and fast approach to measurement of disease activity. Given that this index has been published only recently, no further studies to date have been done on its validity, but it is a promising area in RA foot research.

In contrast, diabetes foot assessment was carried out by all trusts in this audit and is above the current national average at 90.2% [17] and in line with current regional and national recommendations [20, 33]. Despite similar causality pathways for foot ulceration and amputation between diabetes and RA, no research has built on the diabetes risk stratification and assessment for an RA population, despite this being an area recommended by several research teams [34, 35]. It should be noted that despite better risk stratification and better scores in favour of diabetes, amputation rates have reduced but still remain high for both minor and major amputations [36], showing that more factors are involved rather than stratification and subsequent management based on assessment.

Management of the foot/ankle occurs on a conservative level despite the lack of consensus regarding whether this is the best strategy for RA foot management [13]. Even with this lack of agreement, standardization is similar across guidelines both specific and non-specific to RA foot disease [16]. Despite the standardization and availability of RA foot-specific management standards and guidelines, no trust audited in both RA and diabetes met the required adherence score ($>$80) as set out in this audit design, with the RA arm not having the standardization pertained in current research. Similar findings were found in Northern Ireland in terms of RA management adherence in line with best practice [27], but no further explanation was given. There are several reasons that could result in this non-adherence (and should be explored further), but reasons for this appear to be based in a lack of sound theory and infrastructure available [37]. It might also stem from the lack of adherence or knowledge in applying clinical guidelines to clinical practice. Lineker and colleagues [37] found that a lack of dissemination by teams, lack of access to recommended services and lack of clinical team input into arthritis-based guidelines are the reasons for many services not integrating their care with clinical guidelines and standards. This can also be seen in the lack of teams stating that their management is in line with current recommendations (one trust stated this). This gives both podiatry and rheumatology the need to disseminate research further and encourage more MDT work between these two professions in order to improve the complex management of the RA patient.

Chronic diseases, such as RA and diabetes, share similar characteristics in their disease progress: disability, deformity, complex medical management and psychosocial issues. Many of these issues can be self-managed when appropriate training and support are given, and this is the reason for inclusion of self-management in NICE guidelines for both RA [9] and diabetes [20]. This is reflected well in the present audit, because five of six and six of six trusts ensured that self-management was key to RA and diabetes foot health, respectively.

Allied health education in rheumatology is poor owing to the lack of continuous professional development on offer [10, 38, 39]. This, coupled with the largest UK professional body in podiatry, the College of Podiatry, focusing on diabetes and vascular development by their members [40] further underpins the need for rheumatology specialist podiatrists. These conclusions are evident in this audit, with only one trust having a podiatrist with postgraduate rheumatology training compared with four trusts having a podiatrist with postgraduate diabetes/vascular training. This lack of diversity in the rheumatology MDT contributes to the lack of foot health education

offered and is the opposite seen within a diabetes MDT, although education given to an MDT by podiatrists can improve lower limb outcomes [32, 33].

There is a general gap in rheumatology foot research in terms of guideline adherence, and ours is the first known study to audit adherence to UK-based standards in the RA foot but also to compare this with the well-established foot management standards in diabetes. No trust audited met all standards for both RA and diabetes, but diabetes standards were met across five out of six trusts. When adherence scores were compared, RA scored a mean of 1.6, whereas diabetes scored a mean of 62. This meant that the audited trusts were not meeting 95% of current national RA foot standards, compared with 40% not meeting diabetes foot standards. A major reason why this was found is down to inequality in health care; more specifically, inequality in podiatry service provision. McCulloch and colleagues [40] discuss how podiatry is bound by boundary work, whereas podiatry sticks within its known clinical areas, such as diabetes or vascular, and thus their services are usually based on this work. This might lead to inequalities in podiatry access from commissioners, because they might not be aware of the growing scope of podiatry, clinicians who feel they may not be appropriating trained in areas outside their boundary work and patients who are not aware of the role of podiatry in the management of their condition. However, this is an area that does require more research.

Strengths of this audit include that it is first known study to assess current standards in RA foot health management in the UK, in addition to the use of the NWCEG Rheumatology audit tool. It is hoped that the research presented will further strengthen the exploration of current standards in RA foot health and will shed a spotlight of this under-researched area, hopefully starting a process of improvement. It is also the first study to examine current implementation of current local/national RA foot criteria as set out by the NWCEG Rheumatology audit tool. No other published study has used this data collection tool before. This will only improve the capabilities of the tool in the future.

The major limitations of this audit were the introduction of potential bias during data collection and the sample size. Given that clinical leads completed both data collection tools, this could have led to an introduction of bias, because they may have wanted to show that their service is meeting current standards. This appeared not to have occurred given the results found, but it would have reduced bias if people not part of the audited services audited the management of RA and diabetes foot health to ensure an independent view; however, this was not possible owing to time constraints. Eight trusts were approached initially to complete this audit, with six giving consent. Although studies with low numbers of participants are easier to conduct, the low numbers mean that caution is advised when interpreting results. Six out of eight trusts is high, because only the North-East London NHS sector was audited. Nevertheless, it would have been more beneficial to recruit varying trusts over multiple regions across the UK.

Key recommendations

Several recommendations have been made following the results of this audit and its presentation to relevant bodies during the dissemination of the research. Some of the recommendations made were as follows. First, there is a need for workshops on the implementation of RA foot management guidelines and their clinical benefits (within the podiatry and rheumatology units in the sector audited), followed by larger-scale workshops for podiatrists in podiatric rheumatology health and its association with the high-risk foot, developed in a similar way to diabetic foot workshops run by professional bodies in this area. Second, there is a need to promote further research within the area of RA foot assessment and encourage the development of pathways and assessment for the RA foot within a health-care setting. Third, there is a need for the creation of a pro-forma to be used during the assessment of people who present with a rheumatology (not RA specific) foot/ankle issue. This will ensure both high-quality data collection and appropriate clinical documentation, incorporating all aspects of the clinical standards mentioned.

Conclusion

Our findings indicate that there is a blend of poor knowledge and inequality in RA foot health provision and that resources are skewed in favour of diabetes foot provision owing to specific NICE guidelines, payment tariffs and higher-quality research. Despite research stating the affinity of RA to foot/ankle disease, there is a lack of appropriate management for these people, as shown by the findings of these audits, and further research in this area is recommended. This research should be a call to arms to podiatrists and rheumatology teams to implement current national standards for RA foot health into practice, mandating commissioning groups for foot health services that are not disease specific, and to the wider rheumatology community to take RA foot health more seriously.

Funding: No specific funding was received from any bodies in the public, commercial or not-for-profit sectors to carry out the work described in this manuscript.

Disclosure statement: The authors have declared no conflicts of interest. C.J. has declared that the work presented was used in partial fulfilment of an MSc in Rheumatology from the University of South Wales.

Data availability statement

The data underlying this article will be shared on reasonable request to the corresponding author.

Supplementary data

Supplementary data are available at *Rheumatology Advances in Practice* online.

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