Received: 22 November 2022 | Revised: 30 March 2023 | Accepted: 9 May 2023

DOI: 10.1002/jvc2.169

JEADV CLINICAL PRACTICE
OPEN ACCESS JOURNAL OF THE EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

SHORT REPORT

Collaboration in the management of psoriasis and psoriatic arthritis: A survey of joint working in UK clinical practice

Laura Savage[1] | **Arvind Kaul**[2] | **Patricia Gorecki**[3]

[1]Department of Dermatology, The Leeds Teaching Hospitals NHS Trust, Leeds, UK

[2]Department of Rheumatology, St George's University Hospitals NHS Foundation Trust, London, UK

[3]Medical Affairs, Janssen-Cilag Ltd, High Wycombe, UK

Correspondence
Laura Savage, Chapel Allerton Hospital, The Leeds Teaching Hospitals NHS Trust, Leeds LS7 4SA, UK.
Email: L.J.Savage@leeds.ac.uk

Funding information
This work was supported by Janssen-Cilag Ltd.

Abstract

Background: Treatment guidelines for psoriasis and psoriatic arthritis consider all skin and joint domains and recommend collaborative multidisciplinary team (MDT) working. The uptake of joint working in clinical practice for psoriatic disease management has not been well studied.

Objectives: This United Kingdom (UK) study aimed to provide a better understanding of current working patterns and collaborating specialities, as well as benefits and challenges of combined clinics.

Methods: An online survey was emailed to dermatology and rheumatology healthcare professionals (HCPs) using professional networks.

Results: Responses were received between October 2020 and April 2021 ($N = 80$); 60.0% of respondents worked in dermatology and 40.0% in rheumatology. Use of combined clinics with dermatology was reported by 40.6% of rheumatology HCPs, including joint (25.0%), parallel (3.1%) and virtual clinics (6.3%), and MDT meetings (6.2%). Similarly, 50.1% of dermatology HCPs reported use of joint (25.0%), parallel (4.2%) and virtual clinics (2.1%), single visits (2.1%), and MDT meetings (16.7%) with rheumatology. Around one-quarter of respondents collaborated via email, which was also the main method of collaboration with other specialists. Overall, one-quarter of respondents reported no collaboration in psoriatic disease management. Perceived benefits of combined clinics included shared knowledge, improved patient outcomes and increased patient satisfaction. Challenges included difficulties in aligning clinician time and geographical location, as well as limited 'buy-in' from senior management. Most respondents felt that the COVID-19 pandemic had partially or significantly impacted combined clinics.

Conclusions: This study is one of the first to survey collaborative working in psoriatic disease management and the first in the UK. These findings

Laura Savage and Arvind Kaul contributed equally to this study.

demonstrate the variety of approaches used and a lack of collaborative working by one-quarter of respondents. Despite the benefits, numerous challenges in establishing formal arrangements exist. More evidence is needed to demonstrate improved patient outcomes with collaborative working and to standardise best practice.

KEYWORDS

collaborative working, multidisciplinary team working, psoriasis, psoriatic arthritis, real-world survey

INTRODUCTION

Collaborative working is recognised by organisations such as the international Group for Research and Assessment of Psoriasis and Psoriatic Arthritis (GRAPPA), which encourages interdisciplinary management of psoriatic disease.[1] The Psoriasis and Psoriatic Arthritis Clinics Multicenter Advancement Network (PPACMAN) has demonstrated the benefits of collaborative working.[2]

Psoriasis is associated with psoriatic arthritis (PsA) in up to 42% of patients.[3] PsA is heterogeneous and may present with any combination of domain involvement, including skin symptoms, peripheral and axial arthritis, enthesitis and dactylitis.[4] Early PsA diagnosis helps to prevent the development of irreversible joint damage and functional disability.[4] Dermatologists and rheumatologists are central to the management of psoriatic disease, and treatment guidelines recommend collaboration to manage all domains and optimise patient outcomes.[5–7] Wider multidisciplinary working is encouraged to manage associated comorbidities, including metabolic syndrome, nonalcoholic fatty liver disease (NAFLD), inflammatory bowel disease (IBD) and uveitis,[4,7–10] to ensure timely intervention.

Research on the use of collaborative working to manage psoriatic disease in clinical practice is limited. This study aimed to better understand current approaches used in clinical practice in the United Kingdom (UK).

METHODS

An online survey was developed and validated with clinicians working in the UK National Health Service (NHS) to ensure the format was appropriate for healthcare professionals (HCPs). This survey was emailed to dermatology and rheumatology HCPs using professional networks. The comprehensive question set included the respondent's role, collaborating specialities, methods of referral and patient review, benefits and barriers to collaborative working in psoriatic disease management and the impact of the COVID-19 pandemic on practice (Supporting Information: Table 1).

Data were requested on methods of collaboration, including combined clinics, multidisciplinary team (MDT) meetings with or without the patient present and email exchanges. Combined clinics were subdivided into joint clinics (two or more consultants in the same room), parallel clinics (consultants in separate rooms with clinics running at the same time, whereby one clinician will go into the other clinic if required), single patient visits (consultants in separate rooms, with patients seeing both specialities during the same visit) and virtual clinics. Respondents were also asked to record if there was no interaction or if interaction between specialities was only via written referral.

Benefits (for respondents to rank by importance) and challenges (for respondents to describe in terms of difficulty) included in the survey were based on discussions with clinicians. Respondents were able to list any additional benefits or challenges experienced. Survey data were analysed to describe findings.

RESULTS

Eighty responses were received between October 2020 and April 2021 from across the UK. As respondents provided their organisation (i.e., trust or health board), population estimates for the corresponding catchment areas suggest 43.3% of the population of England, 32.0% of Scotland, 26.5% of Wales and 64.8% of Northern Ireland are represented by respondents of this survey.[11–14]

In total, 54 respondents (67.5%) were consultants, two (2.5%) were associate specialists, 22 (27.5%) were clinical nurse specialists and one respondent each was a lead pharmacist (1.3%) and a specialist registrar (1.3%). Dermatology HCPs accounted for 60.0% of

respondents ($n = 48$) and rheumatology HCPs accounted for 40.0% ($n = 32$).

As part of their management of patients with psoriatic disease, most respondents (75.0%; $n = 60$) worked collaboratively with at least one other speciality.

Varied approaches to collaboration with dermatology HCPs were reported by 65.6% of respondents working in rheumatology (Figure 1a). These included joint clinics (25.0%), parallel clinics (3.1%), virtual combined clinics (6.3%), MDT meetings with (3.1%) and without patients (3.1%), and email exchange (25.0%).

Conversely, collaboration with rheumatology HCPs was reported by 72.9% of dermatology respondents (Figure 1b). Reported models included joint clinics (25.0%), parallel clinics (4.2%), two clinics in the same visit (2.1%), virtual combined clinics (2.1%), MDT meetings with (10.4%) and without patients (6.3%), and email exchange (22.9%).

Collaboration with specialists outside of dermatology and rheumatology also showed a wide range of approaches, but occurred mainly by email. Use of email exchange for advice was most common with gastroenterology (31.3% for both rheumatology and dermatology respondents) and hepatology (21.9% and 35.4%, respectively; Figure 1a,b). No relationship or the use of only written referral was common with other specialities.

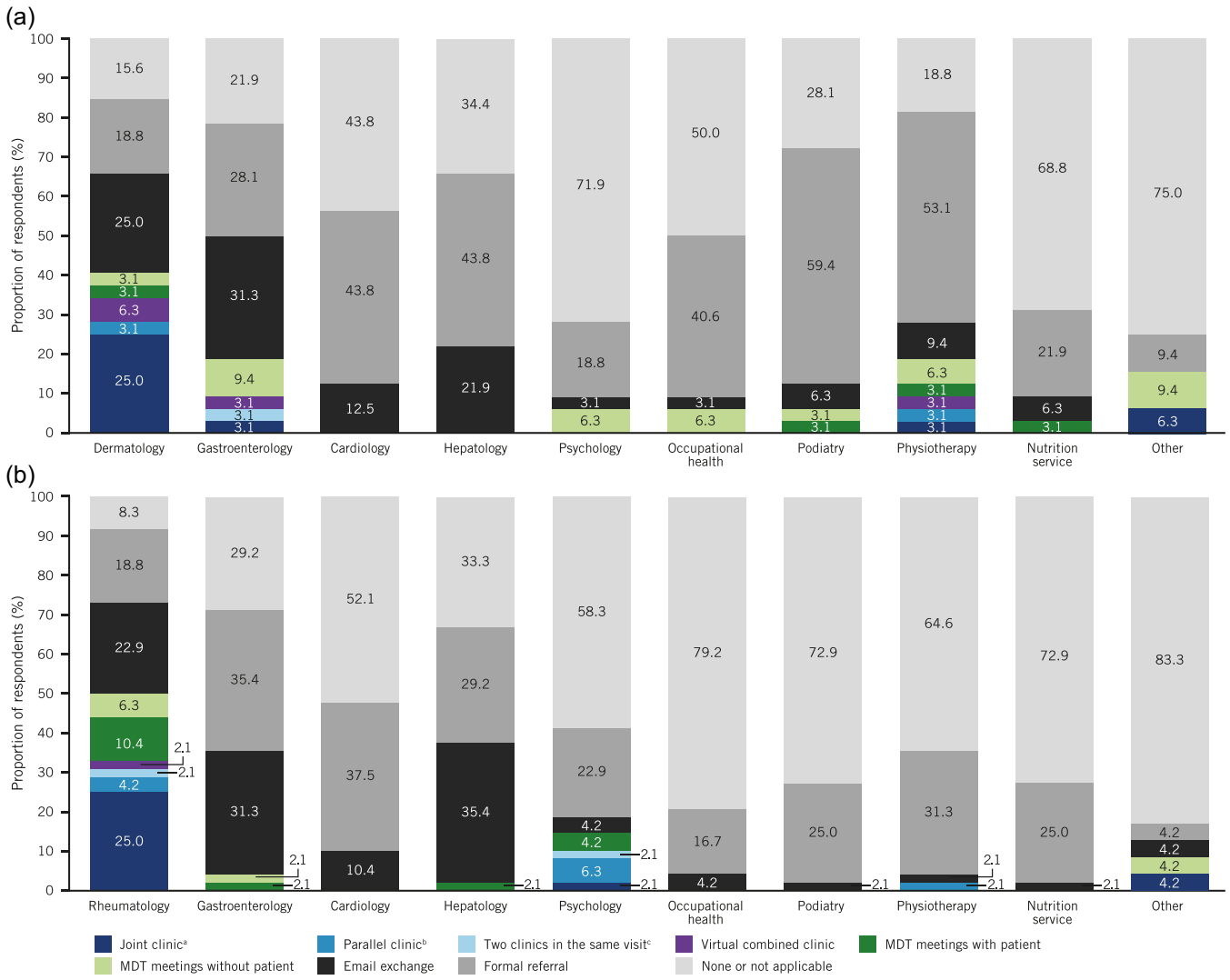

FIGURE 1 Proportion of (a) rheumatology ($n = 32$) and (b) dermatology ($n = 48$) respondents reporting collaborative work with other specialities in the management of psoriatic disease. Different approaches to combined clinics for (a) rheumatology respondents and each speciality or (b) dermatology respondents and each speciality are shown in colour. Informal collaboration via email is shown in black, and formal referral and no collaborative work are shown in grey. Percentages shown may not total 100% because of rounding. MDT, multidisciplinary team. [a]Two (or more) consultants in the same room. [b]Consultants in separate rooms with the clinics running in parallel, whereby one clinician will go into the other clinic if required. [c]Consultants in separate rooms with patients seeing both specialities during the same visit.

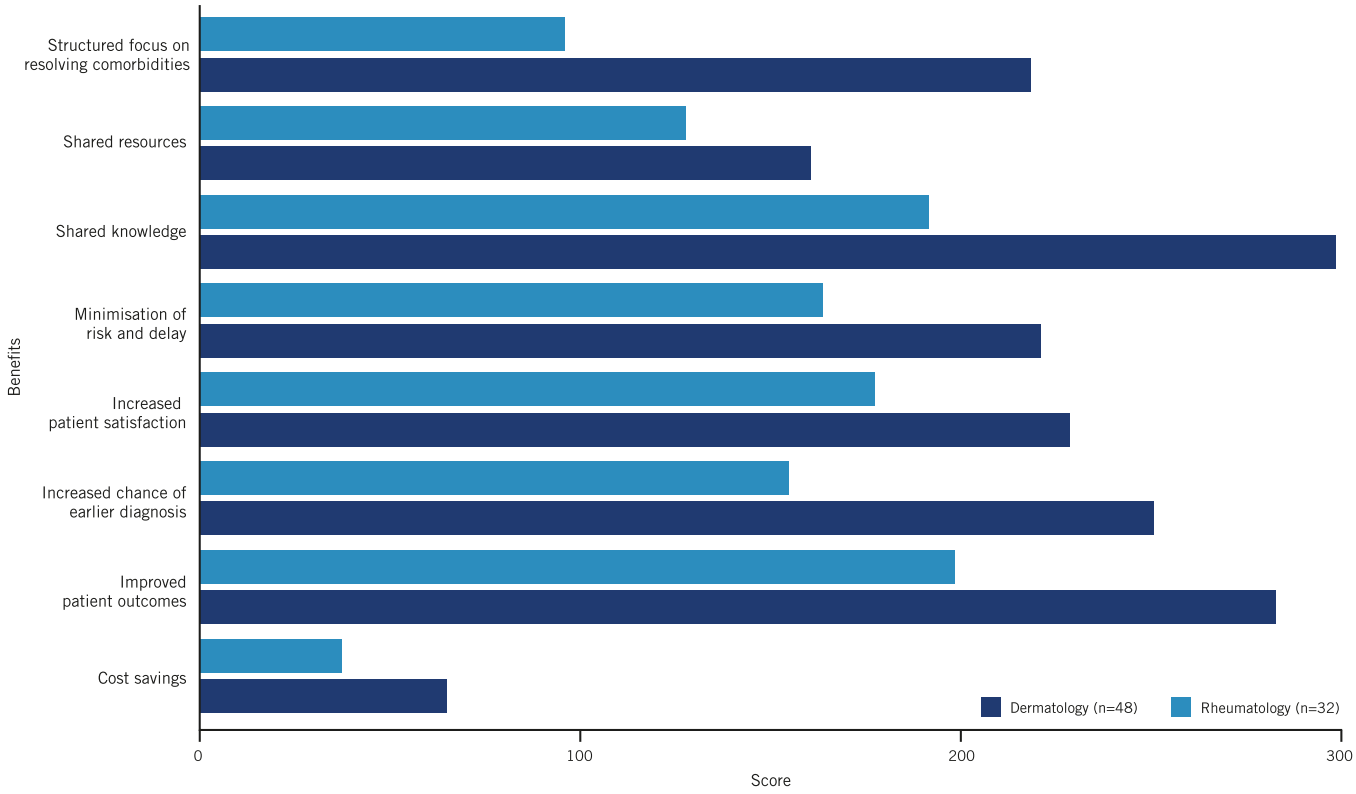

FIGURE 2 Ranking of benefits of combined clinics for psoriatic disease by importance (weighted score).

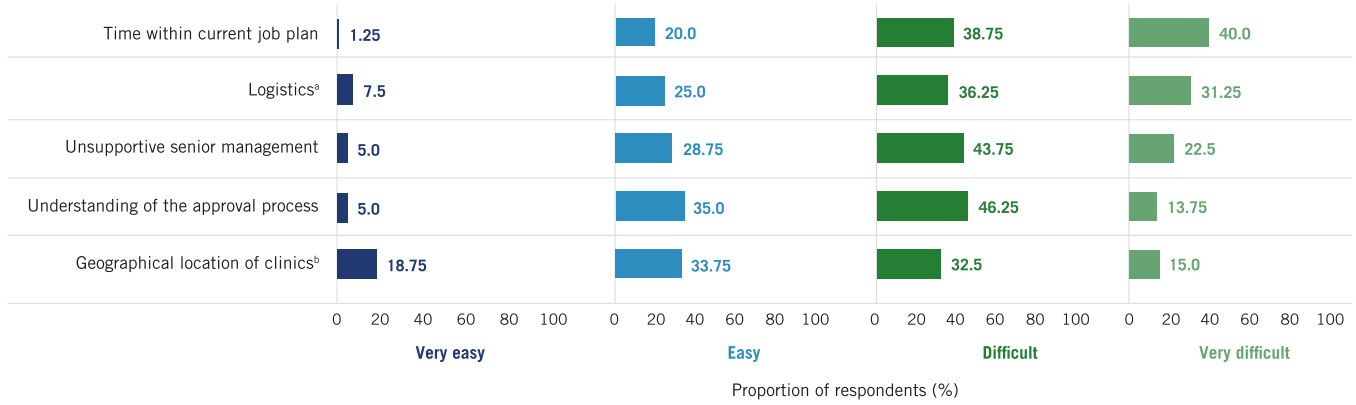

FIGURE 3 Proportion of respondents ($N = 80$) who reported ease/difficulty of each barrier in setting up a combined clinic for the management of psoriatic disease. [a]Such as space or organisation within the clinic. [b]Such as different buildings or hospitals.

The most important perceived benefits of collaborative combined clinics, such as joint or parallel set-ups, were shared knowledge, improved patient outcomes and increased patient satisfaction (Figure 2).

The biggest challenges to setting up combined services (Figure 3) included time within job plans (rated as 'difficult' or 'very difficult' by 78.8% of respondents), logistics (67.5%) and unsupportive senior management (66.3%). Funding approvals and difficulties in finding colleagues across specialities willing to agree to a regular collaborative approach also presented significant challenges.

When asked about the impact of the COVID-19 pandemic on combined clinics, 77.5% felt that it had an impact, either partial (31.3%) or significant (46.3%). A significant impact was described by a greater proportion of those working in rheumatology (66.7%) than in dermatology (33.3%).

DISCUSSION

This study is one of the first to survey collaborative working in psoriatic disease management and the first to explore this in the UK. HCPs in North America surveyed by PPACMAN identified training opportunities as a benefit of combined rheumatology-dermatology clinics, whereas challenges included gaining institutional 'buy-in' and filling specialist schedules appropriately.[2] A study of collaborative working models in Spain additionally highlighted scheduling as a barrier.[15] Further reported benefits of combined clinics in the United States were improved patient outcomes, enhanced physician knowledge and satisfaction of both parties.[16] The experience of an established clinic in Italy also reported improved patient quality of life.[17] This suggests that, although the health systems differ, there are parallels in perception of collaborative working between this survey and studies in other countries.[2]

Collaborative working is included in treatment guidelines and encouraged by UK policy initiatives, such as Teams without Walls.[5–7,18] Despite this, uptake of such initiatives in the UK appears to be limited, as exemplified in this study. This is likely due to barriers, including setting up formal combined clinics, funding approval, geographical restraints and job plan time.

The findings of this survey demonstrate the heterogeneity of approaches used to practise combined working in UK clinics and suggest that approaches are adapted to suit the organisation, with no 'gold-standard' method. Collaborative working between dermatologists and rheumatologists need not be limited to joint clinics or MDT meetings that happen in the same room or centre. Indeed, virtual clinics, although not widely used according to this survey, may be a viable option for collaborative working in clinical practice. A significant impact on combined clinics due to the COVID-19 pandemic was, for example, noted by a greater proportion of those working in rheumatology than dermatology, possibly because skin symptoms of psoriatic disease are more easily assessed via telemedicine than joint symptoms.

Wider use of collaborative working between dermatology and rheumatology may increase knowledge sharing and allow for earlier diagnosis of PsA. There is ongoing research into earlier treatment in patients with psoriasis and the potential for intercepting PsA development.[19]

Informal collaboration with gastroenterology and hepatology HCPs was reported in this survey. This collaboration may be useful in earlier diagnosis of relevant conditions and in therapy selection. Patients with psoriatic disease have an increased risk of IBD, which itself can present with dermatological and rheumatological manifestations.[20] Additionally, patients with psoriasis are at an increased risk of NAFLD, and therapeutic agents used in psoriatic disease commonly require hepatitis prescreening and regular liver function testing.[6,21,22] As such, collaborative working may encourage greater understanding about which patients should be referred for further liver disease investigations.

Although data are limited, there was a clear desire for allied health professionals to be involved in psoriatic disease management, with psychological support and well-being clinics cited as being important by a number of respondents. These specialists may well add value, but difficulties outlined earlier in this report in clinic set-up and funding restrictions affect incorporation of these personnel.

More evidence is needed to demonstrate the perceived benefits of collaborative working and its impact on patient satisfaction and outcomes (including comorbidities), as well as benefit to clinicians. This could be achieved through audits and analyses of costs and waiting times. Development and sharing of best practice in combined clinic set-up could also support wider use of collaborative working, as has been published for Spanish clinical practice.[15]

One limitation of this study is the potential bias in sending the survey to known contacts of the authors and those who have previously consented to be contacted by the study sponsor. This may have resulted in an inherent bias towards HCPs working in psoriatic disease and using collaboration in its management, particularly as not all HCPs who received the survey completed it.

To the best of our knowledge, this is the first study to explore collaborative working in the management of psoriatic disease in UK clinical practice. Our findings demonstrate the variability in approaches, with a lack of collaborative working reported by one-quarter of respondents. A number of barriers remain, but patient benefit and clinician perception, as demonstrated by organisations like PPACMAN, suggest combined clinics should be part of future psoriatic disease management.

AUTHOR CONTRIBUTIONS

All named authors meet the International Committee of Medical Journal Editors (ICMJE) criteria for authorship for this article, contributed substantially to the conception and design, acquisition of data, analysis and interpretation of the data and drafting of the manuscript. All authors revised the manuscript critically for important intellectual content, approved the version to be published and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are

appropriately investigated and resolved. Laura Savage and Arvind Kaul contributed equally to this manuscript. On behalf of the other authors, Laura Savage acts as the corresponding author.

ACKNOWLEDGEMENTS

Support in data analysis was provided by Alun Passey, PhD, of Janssen-Cilag Ltd. Medical writing and administrative support was provided by Rebecca Howard, BSc (Hons), and Stacey Osafo, MRes, at OPEN Health Communications, funded by Janssen-Cilag Ltd.

CONFLICTS OF INTEREST STATEMENT

Laura Savage has provided education, participated in advisory boards and/or received research funding from the following pharmaceutical companies: AbbVie, Almirall, Amgen, Biogen, Celgene, Celltrion, Eli Lilly, Galderma, Janssen-Cilag, Leo, MSD, Novartis, Pfizer, Sanofi and UCB. She has no financial disclosures. Arvind Kaul has provided education and/or participated in advisory boards for AbbVie, Eli Lilly, Janssen-Cilag, Leo, MSD, Novartis and Pfizer. Patricia Gorecki is an employee of Janssen-Cilag Ltd.

DATA AVAILABILITY STATEMENT

The research data are not shared.

ETHICS STATEMENT

Not applicable.

ORCID

Laura Savage http://orcid.org/0000-0002-8283-6519

REFERENCES

1. Mease PJ, Gladman DD, Krueger GG. Group for Research and Assessment of Psoriasis and Psoriatic Arthritis (GRAPPA). Ann Rheum Dis. 2005;64:ii1–ii2.
2. Okhovat JP, Ogdie A, Reddy SM, Rosen CF, Scher JU, Merola JF. Psoriasis and Psoriatic Arthritis Clinics Multicenter Advancement Network Consortium (PPACMAN) survey: benefits and challenges of combined rheumatology-dermatology clinics. J Rheumatol. 2017;44:693–4.
3. Mease PJ, Armstrong AW. Managing patients with psoriatic disease: the diagnosis and pharmacologic treatment of psoriatic arthritis in patients with psoriasis. Drugs. 2014;74:423–41.
4. Coates LC, Helliwell PS. Psoriatic arthritis: state of the art review. Clin Med (Lond). 2017;17:65–70.
5. Gossec L, Baraliakos X, Kerschbaumer A, de Wit M, McInnes I, Dougados M, et al. EULAR recommendations for the management of psoriatic arthritis with pharmacological therapies: 2019 update. Ann Rheum Dis. 2020;79:700–12.
6. Smith CH, Yiu ZZN, Bale T, Burden AD, Coates LC, Edwards W, et al. British Association of Dermatologists guidelines for biologic therapy for psoriasis 2020: a rapid update. Br J Dermatol. 2020;183:628–37.
7. Coates LC, Soriano ER, Corp N, Bertheussen H, Callis Duffin K, Campanholo CB, et al. Group for Research and Assessment of Psoriasis and Psoriatic Arthritis (GRAPPA): updated treatment recommendations for psoriatic arthritis 2021. Nat Rev Rheumatol. 2022;18:465–79.
8. Schett G, McInnes IB, Neurath MF. Reframing immune-mediated inflammatory diseases through signature cytokine hubs. N Engl J Med. 2021;385:628–39.
9. Chi CC, Tung TH, Wang J, Lin YS, Chen YF, Hsu TK, et al. Risk of uveitis among people with psoriasis: a nationwide cohort study. JAMA Ophthalmol. 2017;135:415–22.
10. Raychaudhuri SK, Chatterjee S, Nguyen C, Kaur M, Jialal I, Raychaudhuri SP. Increased prevalence of the metabolic syndrome in patients with psoriatic arthritis. Metab Syndr Relat Disord. 2010;8:331–4.
11. Office for Health Improvement and Disparities. NHS acute (hospital) trust catchment populations: 2021 rebase experimental statistics. https://app.powerbi.com/view?r=eyJrIjoiODZmNGQ0YzItZDAwZi00MzFiLWE4NzAtMzVmNTUwMThmMTVlIiwidCI6ImVlNGUxNDk5LTRhMzUtNGIyZS1hZDQ3LTVmM2NmOWRlODY2NiIsImMiOjh9 (2021). Accessed 23 Aug 2022.
12. Public Health Scotland. Health board (2019) population estimates. https://www.opendata.nhs.scot/dataset/population-estimates/resource/27a72cc8-d6d8-430c-8b4f-3109a9ceadb1 (2021). Accessed 23 Aug 2022.
13. StatsWales. Population estimates by local health boards and age. https://statswales.gov.wales/Catalogue/Population-and-Migration/Population/Estimates/Local-Health-Boards/populationestimates-by-lhb-age (2021). Accessed 23 Aug 2022.
14. Northern Ireland Statistics and Research Agency. Population estimates broad age bands (administrative geographies). https://www.ninis2.nisra.gov.uk/public/PivotGrid.aspx?ds=10356&lh=73&yn=1991-2020&sk=74&sn=Population&yearfilter (2020). Accessed 23 Aug 2022.
15. Queiro R, Coto P, Rodríguez J, Notario J, Navío Marco T, de la Cueva P, et al. Multidisciplinary care models for patients with psoriatic arthritis. Reumatol Clin. 2017;13:85–90.
16. Soleymani T, Reddy SM, Cohen JM, Neimann AL. Early recognition and treatment heralds optimal outcomes: the benefits of combined rheumatology-dermatology clinics and integrative care of psoriasis and psoriatic arthritis patients. Curr Rheumatol Rep. 2017;20:1.
17. Luchetti MM, Benfaremo D, Campanati A, Molinelli E, Ciferri M, Cataldi S, et al. Clinical outcomes and feasibility of the multidisciplinary management of patients with psoriatic arthritis: two-year clinical experience of a dermo-rheumatologic clinic. Clin Rheumatol. 2018;37:2741–9.
18. Working Party of the Royal College of Physicians, the Royal College of General Practitioners, the Royal College of Paediatrics and Child Health. Teams without Walls: the value of medical innovation and leadership. https://www.rcplondon.ac.uk/projects/outputs/teams-without-walls-value-medical-innovation-and-leadership (2008). Accessed 23 Aug 2022.
19. McGonagle DG, Zabotti A, Watad A, Bridgewood C, De Marco G, Kerschbaumer A, et al. Intercepting psoriatic

arthritis in patients with psoriasis: buy one get one free? Ann Rheum Dis. 2022;81:7–10.
20. Chia AYT, Ang GWX, Chan ASY, Chan W, Chong TKY, Leung YY. Managing psoriatic arthritis with inflammatory bowel disease and/or uveitis. Front Med (Lausanne). 2021; 8:737256.
21. Prussick RB, Miele L. Nonalcoholic fatty liver disease in patients with psoriasis: a consequence of systemic inflammatory burden? Br J Dermatol. 2018;179:16–29.
22. Smith CH, Yiu ZZN, Bale T, Burden AD, Coates LC, Edwards W, et al. British Association of Dermatologists guidelines for biologic therapy for psoriasis 2020: a rapid update. Br J Dermatol. 2020;183:628–37 (supplementary appendix).

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Savage L, Kaul A, Gorecki P. Collaboration in the management of psoriasis and psoriatic arthritis: A survey of joint working in UK clinical practice. JEADV Clin Pract. 2023;2:559–565. https://doi.org/10.1002/jvc2.169