Evaluation of the First Contact Physiotherapy (FCP) model of primary care: Patient characteristics and outcomes

Authors and Affiliations

S. Stynes[1, 2], K.P. Jordan[1], J.C. Hill[1], G. Wynne-Jones[1], E. Cottrell[1], N.E. Foster[3,1], R. Goodwin[4], A. Bishop[1]

[1]Keele University, School of Medicine, Primary Care Centre Versus Arthritis, Keele, United Kingdom,

[2]Midlands Partnership Foundation NHS Trust, Haywood Hospital Spinal Interface Service, Staffordshire, United Kingdom,

[3] Faculty of Health and Behavioural Sciences, University of Queensland, Australia,

[4]Division of Rehabilitation, Ageing and Wellbeing, Faculty of Medicine & Health Sciences, University of Nottingham, United Kingdom.

Authors' email addresses:

S. Stynes s.stynes@keele.ac.uk Twitter: @SiobhanStynes

k.p.jordan@keele.ac.uk

j.hill@keele.ac.uk

g.wynne-jones@keele.ac.uk

e.cottrell@keele.ac.uk

n.foster@uq.edu.au

rob.goodwin@nottingham.ac.uk

a.bishop@keele.ac.uk

Corresponding Author:

Siobhan Stynes. s.stynes@keele.ac.uk

Telephone 01782 733925

Keele University, School of Medicine, Primary Care Centre Versus Arthritis, Keele, United Kingdom,

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Contribution of Paper

- The FCP national evaluation (phase 3) aimed to evaluate the FCP model of care against five predefined service aims and 12 success criteria.
- Data on patient reported experience and outcomes were collected using an on-line platform.
- This evaluation provides novel useful data on characteristics of patients who access this service and their short-term clinical outcomes. All but one of the pre-specified service success criteria were met. Specific support for the delivery of work advice by FCPs may be needed.

Abstract

Objective

First Contact Physiotherapy (FCP) is a primary care model where expert musculoskeletal (MSK) physiotherapists undertake the first patient consultation, to enhance MSK-patient care and free-up GP capacity. We report the quantitative findings from the FCP National Evaluation (Phase 3) which evaluated the FCP model against success criteria.

Design and Setting

A mixed-methods 24-month service evaluation involving 40 FCP sites and 240 FCPs across England.

Methods

An online platform collected patient-reported experience and outcomes following the FCP consultation and at 1, 2 and 3-months follow-up. These included the Keele STarT MSK Tool, pain intensity (0-10 NRS scale), Musculoskeletal Health Questionnaire (MSK-HQ, range 0-56), and Friends-and-Family Test.

Results

Over 13 months, 2825 patients were invited by email and 24% (n=680) completed their initial questionnaire. Their mean age was 56.2 (14.9 SD), 61% were female, ethnicity was 97% white, mean pain intensity was 6.1 (2.13 SD) and mean MSK-HQ score was 33.8 (9.5 SD). At 3-months follow-up (n=370) there was a 2.8 (CI 2.5,3.1) mean pain intensity reduction from baseline, a mean 7.1 (6.0, 8.2) score improvement in MSK-HQ and 64% reporting overall improvement (much better/better) since seeing the FCP. One of the six success criteria was not met; 29% of those in employment reported receiving specific work advice from the FCP (target ≥75%).

Conclusion

Ahead of the planned scale-up of the FCP primary care model across the UK, this evaluation provides useful data on patients who access this service, their short-term clinical outcomes and whether key success criteria are being met.

Keywords

Musculoskeletal, first contact physiotherapy, General practice, primary care

Background

Meeting the growing demand for musculoskeletal (MSK) healthcare in the face of a growing and ageing population is a significant challenge for health service delivery. MSK conditions are the leading cause of disability adjusted life years [1]. In the UK, MSK problems are predominantly managed in primary care where they account for approximately 14% of General Practitioner (GP) consultations [2]. This is important in the wider context of rising workload (in English practices) [3] and difficulties maintaining the GP workforce. Policy-driven diversification of the workforce has been addressing these issues over the last five years. Part of this solution are first contact physiotherapists (FCPs); autonomous practitioners who have been introduced to streamline MSK care pathways, provide faster access to specialist MSK healthcare, and release GPs' MSK capacity to manage other patients. The commitment from the NHS Long Term Plan in 2019 [4], using the mechanism of primary care networks, is to ensure the patient population covered by NHS England has direct access to FCPs by 2023/24.

FCPs are typically experienced MSK physiotherapists with advanced practice skills who are competent at managing the full spectrum of MSK patients, including the most complex cases. It is within the scope of practice of some FCPs in the UK to prescribe medication, order scans, perform joint injections and list patients for surgery [5]. Since 2018, a rapid roll-out of FCP services across England was stimulated by the Elective Care Transformation Programme (ECTP) within the NHS England's supported pilot of FCP services within 42 sustainability and transformation partnership areas (STPs). Within the ECTP, a pilot site constituted a nominated Clinical Commissioning Group (CCG) and/or group of general practices (circa 50,000 population).

The FCP National Evaluation comprises three phases. Phases 1 and 2 were led by the NHSE ECTP with support from the Chartered Society of Physiotherapy (CSP) in the development and mobilisation of the two phases. Results were published in January 2020 [6]. Phase 1 was an information-gathering survey about FCP services. Phase 2 collected FCP consultation data over 10 months using a tool embedded in the electronic health record system of FCP pilot sites. Phase 3, led by our team, was a national mixed-methods evaluation of the FCP model of care. Here, we report the quantitative findings of this Phase 3 evaluation.

Overall aim

To evaluate the FCP model of care against predefined service aims and success criteria.

Objectives:

a. Achieve a-priori agreement of the FCP's service aims and success criteria, against which the new FCP model of care could be evaluated
b. Describe the characteristics of patients who access FCPs
c. Describe patients' experiences of, and outcomes from, seeking care from FCPs.

Methods

Agreement of service aims and success criteria

The evaluation team, with stakeholder input, drafted five service aims and 12 success criteria based on published literature [2,7] and the Elective Care High Impact Interventions Implementation Framework [8]. The draft service aims and success criteria were made available to CSP's interactive (iCSP) FCP network, the FCP steering group and presented to a Patient and Public Involvement and Engagement (PPIE) Group for discussion and finalisation. The service aims and success criteria are reproduced in Table 2 in the Results section of this paper. Those relevant to this quantitative evaluation are shaded in grey.

Study design and setting

This mixed-methods service evaluation was 24-months duration. The qualitative component explored the views and experiences of FCPs, GPs, patients and practice staff; the methods and findings of this are reported in the linked qualitative paper (Goodwin et al Qualitative companion paper). Within this paper we describe the methods and findings of the quantitative part of the evaluation.

FCP Sites

One of the prerequisites of being a FCP pilot site in England included participation in the NHSE FCP National Evaluation. A pilot site had to meet the criteria within NHSE's FCP for MSK Services specification; this included employing FCPs working at Agenda for Change Band 7 or 8a and who meet the criteria of the Health Education England and NHSE MSK Core Capabilities Framework [9]. The CSP FCP coordinating team contacted pilot FCP sites to request that they forward FCP contact details to the evaluation team. FCPs who contacted the evaluation team were given an individual log-in to access the online patient registration platform. A short training video and instructions were provided to explain to FCPs how to invite their patients to receive further information about participating in the evaluation. To ensure sufficient patient responses, we also invited FCP sites, from across the UK, who were not participating in the NHSE National Evaluation. The additional FCP services were eligible to take part if their service met the pilot site criteria. The invite for additional FCP services was advertised via social media (twitter and interactive CSP (iCSP) network) and at a national conference FCP workshop.

Patient recruitment and consent

Between late December 2018 and early January 2020, FCPs asked patients accessing their service for verbal consent for email contact by the evaluation team. The eligibility criteria for patients to be invited by the FCP were (i) 18 years or older (ii) consulting the FCP with a musculoskeletal condition (iii) able to complete online questionnaires (has access to a smart phone/tablet/computer) and (iv) not considered vulnerable (end of life, cognitively impaired, severe mental illness). When a patient consented to be contacted, the FCP entered the patient's date of birth and email address into the online registration system so the patient could automatically be sent a link and unique ID code for further information about the evaluation and the initial online questionnaire. Patients consented to share their data with the evaluation team by ticking a 'consent to share data' box at the end of the questionnaire and submitting their completed questionnaire through the online system.

Data collection – system

An online evaluation platform collected clinical outcome and evaluation data. The platform used an adapted version of the patient survey from a previous study (MSK-Tracker MSK) [10]. The platform data meets regulatory requirements for General Data Protection Regulation (GDPR), NHS Information Governance and Good Clinical Practice. Emailed invitations to complete online follow-up questionnaires at 1, 2 and 3 months were sent automatically to patients who completed the initial questionnaire.

Data collection

The self-reported measures from the initial and monthly follow-up questionnaires are detailed in Table 1. Patient characteristics included age, gender, ethnicity, MSK problem body site, duration of current MSK problem, MSK pain intensity, comorbidities, health literacy screening question [11], work status, hours in paid employment and claiming benefits. PROMs (Patient reported outcome measures) included MSK health status [12], risk of persistent pain [13], time off work for MSK condition, provision of Fit note from the GP or Allied Health Professionals (AHP) Health and Work Report from the FCP [14] and work presenteeism [15]. PREMs (Patient reported experience measures) included Friends and Family Test [16], FCP acceptability to patients, shared decision making [17], Valuing Patients [18] and Patient Enablement [19].

Monthly follow-up questionnaires collected global change of MSK symptoms since the patient first consulted with the FCP [20], whether patients consulted the GP for the same problem in the last month, MSK pain intensity and time off work due to pain. MSK health status (MSK-HQ), work absence and work presenteeism were collected at 3-month follow-up only.

Sample size

A formal sample size calculation was not performed, as this was a service evaluation. However, to guide the team as to the size of sample needed to make reasonable estimates of key patient reported outcome measures (within a margin of error of +/-5%), we needed 350-400 patients' responses at three-months follow-up for the most conservative estimate of 50% prevalence on the key outcome of global change (binary outcome at cut-point of much better to better compared with no-change to much worse).

Data analysis

Data analysis was primarily descriptive. Patient characteristics, PROMs and PREMS were summarised using frequencies and percentages or as mean and median (standard deviation and interquartile range) as appropriate. Impact on work (work absence and work presenteeism) was determined for those in paid employment. The percentages reporting their MSK symptoms (global change item) as better or much better and reporting consulting their GP for their MSK symptoms in the last month were determined for each month of follow-up. Mean difference (95% confidence interval) in scores from baseline to the three-month follow-up were determined for pain intensity, the impact on health (MSK-HQ), and on work presenteeism (the Stanford Presenteeism scale). The percentage of participants who had a change score in the MSK-HQ of 6 points or more, which is considered the minimal important change (MIC) in score [21], was determined to reflect an improvement in MSK health.

Results

Service aims and success criteria

The five aims (A to E), and 12 success criteria in total (Table 2) were agreed. This paper reports on six of the 12 success criteria pertaining to the quantitative online data collection (success criterion 1, 3, 5, 6, 8 and 9, shaded grey in Table 2). The qualitative component of the evaluation (Goodwin et al Qualitative companion paper) addresses the remaining six criteria.

Service participation

In total, 240 FCPs (204 from NHSE National Evaluation pilot FCP services) from 40 services in England participated in the evaluation. Thirty-four of these services were from the 46 NHSE pilot services (74% participation rate) and six were additional sites. All six additional sites were located in England. The numbers of FCPs per service ranged from 1 to 19 (median 4).

Patient registrations and data

Over 13 months, FCPs invited 2825 patients to participate in the evaluation and 24% (n=680) consented and completed their initial questionnaire. Across the 40 services, the number of patients invited ranged from 1 to 613 and response rates to the baseline questionnaire ranged from 0% to 46% with numbers responding ranging from 0 to 75 across services.

Patient characteristics and PROMS

The characteristics and PROMs of the 680 patients who completed the initial questionnaire are presented in Tables 3 and 4. Mean age was 56.2 (SD 14.9), 61% were female, 97% reported their ethnicity to be white. Mean pain intensity was 6.1 (SD 2.13) out of 10. 47% reported an acute/subacute MSK problem (≤3 months), with 25% having pain in more than one body region and 49% reporting at least one co-morbidity.

PREMs

FCP acceptability to patients was very high; 93% and 95% reported receiving sufficient information about their MSK condition and about self-care, respectively and 98% of responding patients reported having confidence in the FCP’s competency to assess their problem. Patients reported feeling valued as individuals with the domains of 'care and respect' and 'understanding and engagement' scoring 13.8 and 13.3 respectively out of a maximum score of 15. All PREMs are reported in Table 5.

Follow-Up results: PROMs

Follow-up response rates at 1, 2 and 3 months were 63% (n=430), 62% (n=419) and 54% (n=370) respectively. Global change in MSK symptoms (defined as better/much better) since patients first saw the FCP increased monthly from 58% at month 1 (n=249) to 64% (n=237) at month 3. There was a 2.8 (95% CI 2.5, 3.1) mean reduction in pain intensity from baseline (published MIC is 2 [22]) and a mean 7.1 (95% CI 6.0, 8.2) score improvement on the MSK-HQ (published MIC is 6 [19]). Over 3 months, the proportion of patients in employment who took time off work in the last month due to pain remained consistent. All follow-up data are reported in Tables 6 and 7.

Results relevant to success criteria

Five of the six success criteria appropriate to this quantitative part of the evaluation were met (Table 8). Success criteria 8 (patients in employment receiving specific advice about work) was not met.

Discussion

This is the first national, quantitative evaluation of MSK patients' experience and outcomes following consultation with NHS FCPs. The NHSE MSK Core Capabilities Framework [9] recommend FCPs are Band 7 or 8a. The findings of this evaluation apply to FCPs meeting these grades and competencies and we cannot assume the results would be similar if FCPs are therapists with less experience. Self-report data from initial consultations and 3 monthly follow-up questionnaires, show that five out of six of the pre-specified success criteria for FCP services were met. The majority of MSK patients do not see the GP again once they consult with an FCP, FCPs provide patients with self-management advice, high quality care and a good experience.

One of six criteria was not met, given that less than one third of patients in employment reported receiving specific work advice from the FCP. On reflection, the target (75%) may have been too ambitious in the context of the first consultation and may have been better focused on those reporting days-off-work due to MSK symptoms. In the 89 patients that reported MSK-related days-off-work, 45% reported receiving advice about work. Given that individualising care and advice to patients is a marker of high-quality care, we should expect more than 45% of those who had experienced work-related absence to have had a memorable conversation with the FCP about this. For LBP patients a recent study also showed that physiotherapists are not in line with recommendations for giving specific work advice [23]. Supporting FCPs to deliver work specific-advice appears to be an unmet need and perhaps requires more attention in FCP training schemes. Specific support for the delivery of work advice by FCPs may be needed.

We know that about 35% of MSK consultations with the GP will result in a Fit note [24] which is considerably higher than the numbers in our evaluation reporting receiving a Fit note from the GP (6%) or an AHP Health and Work Report from the FCP (3%). What we don't know is how many MSK consulters bypassed the FCP because they were actively care navigated to GPs due to needing a Fit note or if patients self-selected to see a GP instead of a FCP if they thought they needed time off work.

Findings from a systematic review suggested that MSK triage and direct access services can have comparable clinical outcomes when compared to GP-led care [25]. Those who access self-referral services are often younger, slightly more educated, with better socio-economic status and shorter duration of symptoms [26]. These differences in patient profile may be due to the way services are advertised, organised and implemented. It may also be because the GP is historically viewed as the default first point of contact [27, 28]. Similar themes are explored in the FCP Evaluation qualitative companion paper.

Our evaluation data can be compared to our recent study undertaken among patients (n=524) consulting their GP in England about MSK pain in an area without a FCP pathway [29]. The aim was to examine the feasibility of a future cluster randomised controlled trial of stratified care for MSK pain. Comparing the evaluation results with this study, demonstrates similar baseline characteristics between FCP and GP consulters for gender and pain site. Patients consulting FCPs and responding to our emailed invitation and online data collection system, were younger than those consulting GPs and responding to a paper-based questionnaire through postal mail (mean age 56.2 versus 61.1). In this evaluation, 47% of patients had pain for less than 3 months whereas in GP consulters 26% of patients had pain for less than 3 months. This shorter duration of symptoms in FCP consulters may mean that their symptoms resolve more quickly than those with longer symptom duration. The proportion of patients with comorbidities was higher in GP consulters (65%) than the FCP consulters (49%). The proportion of patients classified at high risk of persistent disabling pain was identical for FCP and GP consulters (13%) and was similar for those at low risk (29% v 33%). FCP consulters had better health status as measured by the MSK HQ (33.8) compared to a score of 29.6 in patients consulting the GP. Clinical outcomes at 3 months for FCP consulters compared to 6 month follow-up data for GP consulters were similar for pain (mean change in pain score of 2.8 for FCP consulters versus 2.1 for GP consulters) and mean difference in MSK-HQ score (7.1 in FCP consulters versus 7.5 in GP consulters). However, the proportion of patients reporting global change of worse/much worse is lower in FCP consulters (11%) than GP consulters (22%).

This suggests the cohort of patients seeking GP care appear to be more complex than the FCP participants. These differences in characteristics and outcomes may be due to methodological differences between the studies, such as patients' willingness to participate in online data collection versus paper-based data collection. It may also reflect who patients prefer to consult with when they have more complex presentations or local implementation policies where receptionists or care navigators may direct more complex patients to GPs. Or it may be that FCPs were less likely to invite complex patients to register in the evaluation.

The STEMS-2 study which assessed the impact of self-referral to physiotherapy services, again where there was no FCP pathway, showed an inconsistent impact on GP workload with a significant increase in GP consultations for MSK conditions observed in some practices [30]. In STEMS-2 the physiotherapists were situated separately to the general practices. The presence of a FCP within a GP practice is likely to have a combined impact of diverting some GP MSK workload to FCPs, providing access to some patients who may not have consulted a GP with their MSK condition and reducing the burden within a GP consultation by removing the MSK element within multi-problem consultations.

Limitations

Patients consulting the FCPs were not registered consecutively by the FCP. Reasons for this based on informal feedback with FCPs included time constraints of the consultation (likely to be more of an issue among complex patients), language barriers and FCPs in a new role. There was wide variation in patient registration activity and response to the baseline questionnaire across the FCP sites. One service registered 613 patients but the response rate to the baseline questionnaire was only 12 % (n=75) so it did not bias the overall results towards this service. Various local strategies may have influenced the variation in registration activity and patient response rates, e.g. inputting data at the end of the week to the database, instead of registering patients as recommended at the start of each clinic. Responders ethnicity was overwhelmingly white, despite FCP services located in diverse areas including both rural and urban areas. A limitation of the on-line tool was that it was only available in the English language.

The response rate of 24% to the baseline questionnaire, although low, was as expected using electronic data collection and given the reliance on FCPs to register patients during the time-limited consultation. The evaluation's aim was to describe the FCP model of care and examine if it met agreed and pre-specified success criteria, not to estimate precisely the effect size of the role of FCPs. There are no data on patients who did not participate in the evaluation despite being asked by the FCPs, and no data on the patients who agreed to be registered but did not complete the on-line questionnaires. Therefore, we cannot judge how representative of the general population consulting FCPs the sample is. However, we have highlighted differences in known characteristics of participants of this FCP evaluation with those of similar UK primary care populations to provide the reader with information about possible response bias.

In terms of non-response bias over the three-month follow-up, those with follow-up data were slightly older but there was little difference in gender and baseline severity. It may be those with a more positive experience of FCP were more likely to respond, although we have no data on this, in which case the findings may represent a best case scenario of the FCP model. However, this is the first large scale evaluation of the FCP model and provides valuable information on outcomes and experiences of patients.

Our data do not gather information about the variation in the services and cannot assess whether certain models performed more effectively that others; for example, the FCP co-located within the GP practice versus a community hub model. The roll-out phase of the evaluation was open to FCP services anywhere in the UK but there was no uptake from services outside England. A longer roll-out phase may have facilitated wider engagement.

Conclusion

This evaluation provides novel, useful data on the patients who are accessing FCP services, their short-term clinical outcomes and confirms that all but one key success criteria were met. Ahead of the planned scale-up of the FCP model of primary care across the UK, ongoing evaluation of FCP services is needed to monitor the benefits and challenges of FCP services and add to the body of evidence to optimise their design and delivery. Further work is needed to explore barriers to FCPs providing work advice, to reach agreement on the most appropriate FCP access model to optimise patient experiences and outcomes and to further quantify whether the FCP model is positively influencing GP workload.

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Ethical Approval

This is not a research study but an evaluation of a service, therefore no ethical approval is required.

Conflict of Interest

Annette Bishop is an associate editor of Physiotherapy but was not involved in the review process

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References

[1] Vos T, Abajobir AA, Abate KH, Abbas KM, Abate KH, Abd-Allah F et al. and the GBD 2016 Disease and Injury Incidence and Prevalence Collaborators). Global, regional, and national incidence, prevalence, and years lived with disability for 328 diseases and injuries for 195 countries, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016. Lancet 2017;390(10100):1211–59.

[2] Jordan KP, Kadam UT, Hayward R, Porcheret M, Young C, Croft P. Annual consultation prevalence of regional musculoskeletal problems in primary care: an observational study. BMC Musculoskelet Disord 2010; 11:144. 10.

[3] Hobbs FDR, Bankhead C, Mukhtar T, Stevens S, Perera-Salazar R, Holt T et al. Clinical workload in UK primary care: a retrospective analysis of 100 million consultations in England, 2007-14. Lancet 2016; 387(10035):2323–30.

[4] NHS England. The NHS Long Term Plan 2019. www.longtermplan.nhs.uk. Accessed 20 July 2020.

[5] https://www.csp.org.uk/professional-clinical/improvement-innovation/first-contact-physiotherapy/physiotherapy-primary-care. Accessed 02 July 2020.

[6] Elective Care High Impact Interventions First Contact Practitioner for MSK Services. May 2019.

[7] Hill JC, Afolabi EK, Lewis M, Dunn KM, Roddy E, van der Windt DA et al. Does a modified STarT Back tool predict outcome with a broader group of musculoskeletal patients than back pain? A secondary analysis of cohort data. BMJ Open 2016; 6(10):e012445.

[8] Elective Care High Impact Interventions Implementation Framework NHS England April 2018.

[9] Musculoskeletal core capabilities framework for first point of contact practitioners. https://www.csp.org.uk/system/files/musculoskeletal_framework2.pdf Accessed 22 Jul 2020.

[10]https://www.keele.ac.uk/pcsc/research/researchthemes/musculoskeletalpainandstratifiedcare/msktracker. Accessed 12 Aug 2020.

[11] Morris NS, MacLean CD, Chew LD, Littenberg B. The single item literacy screener: evaluation of a brief instrument to identify limited reading ability. BMC Fam Pract 2006;7:21.

[12] Hill JC, Kang S, Benedetto E, Myers H, Blackburn S, Smith S et al. Development and initial validation of the Arthritis Research UK Musculoskeletal Health Questionnaire (MSK-HQ) for use across musculoskeletal care pathways. BMJ Open 2016;6(8):e012331.

[13] Dunn KM, Campbell P, Lewis M, Hill JC, van der Windt DA, Afolabi E et al. Refinement and validation of the Keele STarT MSK Tool for stratifying patients with musculoskeletal pain. [Submitted and under review].

[14] Allied Health Professionals (AHP) Health and Work Report http://www.ahpf.org.uk/files/AHP%20Health%20and%20Work%20report.pdf. Accessed 20 July 2020.

[15] Koopman C, Pelletier K, Murray J, Sharda C, Berger M, Turpin R et al. Stanford Presenteeism Scale: Health Status and Employee Productivity. J Occup. Environ. Med. 2002; 44(1):14-20.

[16] Prime Minister's Office. (2012) Hospital 'Friends and Family Test' announced. https://www.gov.uk/government/news/hospital-friends-and-family-test-announced Accessed 23 Jul 2020.

[17] Shepherd H, Barratt A, Jones A, Bateson D, Carey K, Trevena LJ et al. Three simple questions to increase information about treatment options and patient involvement in healthcare consultations. Patient Educ. Couns. 2011;84:379–85.

[18] Coyle J. and Williams B. Valuing people as individuals: development of an instrument through a survey of person-centredness in secondary care. J Adv Nurs 2001;*36*: 450-459.

[19] Howie J, Heaney DJ, Maxwell M, Walker JJ. A comparison of a Patient Enablement Instrument (PEI) against two established satisfaction scales as an outcome measure of primary care consultations. Fam Pract 1998;15: 165-71.

[20] Kamper SJ, Maher CG, Mackay G. Global rating of change scales: a review of strengths and weaknesses and considerations for design. J Man Manip Ther 2009;17(3):163–70.

[21] Price AJ, Ogollah R, Kang S, Hay E, Barker KL, Benedetto E, et al. Determining responsiveness and meaningful changes for the Musculoskeletal Health Questionnaire (MSK-HQ) for use across musculoskeletal care pathways. BMJ Open 2019; 9(10):e025357.

[22] Salaffi F, Stancati A, Silvestri CA, Ciapetti A, Grassi W. Minimal clinically important changes in chronic musculoskeletal pain intensity measured on a numerical rating scale. Eur J Pain 2004;8(4):283-91.

[23] Chance-Larsen F, Chance-Larsen K, Divanoglou A, Baird A. The use of an e-learning module on return to work advice for physiotherapists – A prospective cohort stud. Physiother Theory Pract. 2020;36:267-75.

[24] Wynne-Jones G, Mallen CD, Mottram S, Main C, Dunn KM. The identification of UK sickness certification rates, standardised for age and sex. Br J Gen Pract 2009;59:510-515.

[25]. Babatunde OO, Bishop A, Cottrell E, Jordan JL, Corp N, Humphries K, et al. A systematic review and evidence synthesis of nonmedical triage, self-referral and direct access services for patients with musculoskeletal pain. PLoS ONE 2020;15(7): e0235364.

[26]. Swinkels IC, Kooijman MK, Spreeuwenberg PM, Bossen D, Leemrijse CJ, Dijk CEv et al. An overview of 5 years of patient self-referral for physical therapy in the Netherlands. Phys Ther 2014*;* 9(12):1785–95.

[27] Goodwin R, Moffatt F, Hendrick P, Timmons S, Chadborn N, Logan P. First point of contact physiotherapy; a qualitative study. Physiotherapy 2020;108: 29-36.

[28] Moffatt F, Goodwin R, Hendrick P. Physiotherapy-as-first-point-of-contact-service for patients with musculoskeletal complaints: Understanding the challenges of implementation. Prim Health Care Res Dev. 2018;19(2):121-30.

[29] Hill JC, Garvin S, Chen Y, Cooper V, Wathall S, Saunders B et al. Stratified primary care versus non-stratified care for musculoskeletal pain: findings from the STarT MSK feasibility and pilot cluster randomized controlled trial. BMC Fam Pract 2020;21(1):30.

[30] Bishop A, Chen Y, Protheroe J, Ogollah RO, Bailey J, Lewis M et al. Providing patients with direct access to musculoskeletal physiotherapy: The impact on general practice musculoskeletal workload and resource use. The STEMS-2 study, Physiotherapy 2020; doi:https://doi.org/10.1016/j.physio.2020.04.006.

Table 1 Summary of FCP participant self-reported measures

Patient Descriptors	**Definition**	**Time-point of data collection**
Age	Age at initial consultation	I
Gender	Gender	I
Pain location	Site of pain complaint on body mannikin	I
Pain intensity	Average pain intensity during the last 2 weeks NRS (0-10)	I, M1, M2, M3
Episode duration	Length of time of current pain ≤ 3 months, 4-12 months 12-36 months, >36 months	I
Ethnicity	What is your ethnicity? Mixed, Asian, Black, White, other, prefer not to say	I
Comorbidities	Self-reported diagnosed comorbidities from a provided list: heart disease, high blood pressure, poor circulation, lung disease, diabetes, kidney disease, neurological disorder, liver disease, cancer, depression, arthritis	I
Widespread pain	More than one pain site marked on manikin	I
Health literacy screen	Need help with instructions on written material from doctor/pharmacy	I
Risk status Keele STarT MSK tool	Risk of persistent disabling pain High, medium or low risk	I
Musculoskeletal health MSK-HQ	Impact from MSK symptoms	I, M3
Global change	Change in MSK symptoms since initial consultation	M1, M2, M3

Work status and work pattern	In paid employment Typical working week (full time or part time)	I, M3
Baseline employment	Receive benefits In those employed: Receive fit note from GP Received AHP Health and Work report from FCP	I I I
Work absence	Time off work last 12 months because of pain	I, M1, M2, M3
Work Presenteeism Stanford Presenteeism work scale	Impact of MSK pain on work experiences in the past month	I, M 3
Work advice	Received specific advice from FCP about work	I
Friends and family test	Recommend to friends & family:	I
Acceptability	Sufficient information on condition Sufficient information on self-care Confidence in FCP's competency to assess problem	I
Shared decision making	Support available to help make decision about treatment How well you know your treatment options Pros and cons for each option	I

Valuing people	Valuing people as individuals scale: Problems were regarded as important by the FCP Clinic staff listened attentively FCP answered all my questions Clinic staff were approachable and easy to talk to FCP treated me as an intelligent human being The clinic staff treated me kindly	I
Patient enablement	Patient enablement instrument As a result of your visit to FCP, do you feel you are able to… Cope with life Understand your condition Cope with your condition Keep yourself healthy Be confident about your health Able to help yourself	I

Table 2 Service aims and Success criteria of FCP model

Aim A: FCP services should reduce the workload of GPs	
[*]Success criterion 1	The percentage of patients consulting the FCP who report (within 3 months) visiting their GP for the same problem will be: 25% or less (fully met), 26-50% (partially met), 51% or more (not met).
Success criterion 2	GPs discourse reflects confidence in the FCP service and competence of the FCPs.
Aim B: FCP services should provide assessment and self-management advice.	
[*]Success criterion 3	Patients will report receiving self-management information/exercises from their FCP relating to their joint or muscle symptoms. 70% or more (fully met), 50-69% (partially met), 49% or less (not met).
Success criterion 4	Patient discourse reflects self-efficacy and confidence in self-management techniques.
Aim C: FCP services should provide high quality care and a good patient experience to patients with MSK problems	
[*]Success criterion 5	Patients should report improved MSK health at 3 months (as measured by achieving a minimal important change of 6 points on the MSK-HQ): 51% or more (fully met), 40-50% (partially met), 39% or less (not met).
[*]Success criterion 6	Patients report being 'Likely' or 'Very likely' to recommend the FCP service to friends and family. 80% or more (fully met), 60-79% (partially met), 59% or less (not met).
Success criterion 7	Patient discourse reflects a positive experience of FCP.
Aim D: FCP services should support patients to remain in/return to work	

[*]Success criterion 8	Patients in employment report receiving specific advice about work. 75% or over (fully met), 50-74% (partially met), 49% or less (not met).
[*]Success criterion 9	Patients will report less impact of their MSK condition on work performance at 3 months (as measured by the Stanford Presenteeism Scale): 51% or more report reduced impact (fully met), 40-50% (partially met), 39% or less (not met).
Success criterion 10	Physiotherapist's discourse reflects confidence in their competence to offer advice with regards to work related issues.
Success criterion 11	Patient's discourse reflects perceived benefit from the advice offered by the FCP with regards to work related issues.
Aim E: FCP services should provide staff with a positive experience	
Success criterion 12	Staff discourse reflects a positive experience of working with and in the FCP services.
[*]Success criterion addressed by the quantitative online data collection reported in this paper	

Table 3 Patient characteristics and initial questionnaire PROMS

Total response		680
Age[a]: Mean (SD)		56.2 (14.92)
Range		18-87
Female[b]: *n* (%)		411 (61)
Ethnicity[c]: *n* (%)	White	647 (97)
	Asian	10 (1)
	Other	13 (2)
MSK Problem body site: *n* (%)		
Head		7 (1)
Neck		63 (9)
Shoulder/upper arm		179 (26)
Lower arm/wrist		45 (7)
Hand		55 (8)
Upper back/chest/abdomen		38 (6)
Lower back/pelvis		136 (20)
Hip/groin/thigh		129 (19)
Knee/lower leg		177 (26)
Ankle/foot		79 (12)
>1 area of pain		167 (25)
Duration current MSK problem[a]: *n* (%)		
	≤ 3 months	321 (47)
	4-12 months	187 (28)
	12-36 months	86 (13)
	>36 months	85 (13)

Pain intensity[d]: Mean (SD)	6.1 (2.13)
Keele STarT MSK tool[e]: *n* (%)	
Low Risk	194 (29)
Medium risk	396 (58)
High risk	88 (13)
MSK-HQ[f]: Mean (SD)	33.8 (9.53)
Comorbidity[g]: yes, *n* (%)	334 (49)
Health literacy screen (Need help with instructions on written material from doctor/pharmacy)[a]: Never *n* (%)	630 (93)

[a] total *n* = 679; [b] total *n* = 677; [c] total *n* = 670; [d] pain intensity on average over past 2 weeks, score range 0-10, high scores indicate worse pain; [e] total *n* = 678; [f] total *n* = 679, score range 0-56, high scores better; [g] reported diagnosis of at least one of: heart disease, high blood pressure, poor circulation, lung disease, diabetes, kidney disease, neurological disorder, liver disease, cancer, depression, arthritis

Table 4 –Employment

Total response, n	680
Claiming benefits[a]: *n* (%)	40 (6)
Paid employment: *n* (%)	388 (57)
Full-time[b]: *n* (%)	265 (68)
Time off work last 12m due to pain[b]: *n* (%)	89 (23)
Fit note from GP[b]: *n* (%)	22 (6)
AHP Health and Work Report from FCP[b]: *n* (%)	12 (3)
Received advice from FCP about work[b]: *n* (%)	114 (29)

Received advice from FCP about work in those off work in last 12m^c: *n* (%)	40 (45)
^{a} total *n* = 633; ^{b} denominator is those in paid employment; ^{c} *n* = 89; AHP Allied Health Professional	

Table 5 – PREMS after visit to FCP

Total response	680
Friends and Family test: n (%)	
Recommend to friends & family: *Extremely likely*	490 (72)
Likely	148 (22)
FCP acceptability: *n* (%)	
Received sufficient information on condition	632 (93)
Received sufficient information on self-care	645 (95)
Confidence in FCP's competency to assess problem	665 (98)
Shared Decision Making: n (%)	
Amount of support to help you make decisions about treatment:	
Excellent or good support	562 (83)
How well now know treatment options:	
Very well or well	580 (85)
Now know pros and cons for each treatment option:	
Very well or well	519 (76)
Valuing People as Individuals^a	
Care and Respect: Mean (SD)	13.8 (1.55)
1) Clinic staff listened attentively	
2) Clinic staff very approachable & easy to talk to	
3) Clinic staff treated me kindly	

Understanding and Engagement: Mean (SD) 1) *Problem regarded as important by therapist* 2) *Therapist answered all my questions* 3) *Therapist treated me as intelligent human being*	13.3 (1.64)
Patient Enablement Instrument[b]: Mean (SD)	5.8 (3.77)
[a] Range 3-15; high scores better. Each scale made up of the 3 items listed [b] *n* = 634, range 0-12, high scores better	

Table 6 – Follow-up: all respondents PROMS

	Month 1	Month 2	Month 3
Total response	430	419	370
Age: Mean (SD)	58.2 (14.12)	57.9 (14.04)	59.0 (13.58)
Range	18-87	18-87	21-87
Female[a]: *n* (%)	251 (59)	260 (62)	223 (61)
Global change since first saw FCP: *n* (%)			
Much better/Better	249 (58)	261 (62)	237 (64)
Same	140 (33)	110 (26)	93 (25)
Much worse/Worse	41 (10)	48 (11)	40 (11)
Saw GP for same problem in last month: *n* (%)	43 (10)	60 (14)	37 (10)
Saw GP for same problem in last 3 months[b]: *n* (%)	N/A	N/A	56 (20)
Pain intensity score[c]: Mean (SD)			
Baseline	6.03 (2.15)	6.10 (2.19)	6.11 (2.16)
Follow-up	4.04 (2.55)	5.76 (2.44)	3.31 (2.74)
Mean difference from baseline[d] (95% CI)			

	1.98 (1.73, 2.23)	0.33 (0.10, 0.56)	2.80 (2.51, 3.09)
MSK-HQ score[e]: Mean (SD)			
Baseline	N/A	N/A	34.4 (9.22)
Follow-up			41.5 (11.31)
Mean difference from baseline[d] (95% CI)			7.1 (6.0, 8.2)
MSK-HQ score improved by ≥6[f] points: *n* (%)	N/A	N/A	199 (54)

[a] total *n* month 1=427, month 2=419, month 3=368; [b] those responding at all 3 follow-up points only, *n* = 275; [c] pain intensity on average over past 2 weeks, score range 0-10, high scores indicate worse pain; [d] Mean difference > 0 indicates improvement; [e] score range 0-56, high scores better; [f] 6 points is minimal important change

Table 7 – Follow-up: employed only

	Month 1	Month 2	Month 3
Total response to date	430	419	370
In paid employment at baseline: *n* (%)	225 (52)	222 (53)	186 (50)
Time off work last 1m due to pain[a]: *n* (%)	21 (9)	16 (7)	17 (9)
Stanford Presenteeism Scale score[a,b]: Mean (SD)			
Baseline	N/A	N/A	21.4 (5.66)
Follow-up			22.8 (5.98)
Mean difference from baseline[c] (95% CI)			1.46 (0.70, 2.22)
Improved score Stanford Presenteeism Scale[a,d]: *n* (%)	N/A	N/A	98 (54)

[a] In those in paid employment at baseline; [b] score range 6-30, high scores better; [c] Mean difference > 0 indicates improvement; [d] Improvement defined as an increase in score from baseline to 3 months

Table 8 Success criteria, target and outcome.

	Service Success Criteria	Target	Outcome	Target fully met
1	The percentage of patients consulting the FCP who report (within 3 months) visiting their GP for the same problem	25% or less	20% of patients who responded at all 3 follow-up points (n=275) saw the GP for the same MSK problem in the 3 months following their initial visit	YES
3	Patients will report receiving self-management information/exercises from their FCP relating to their joint or muscle symptoms	70% or more	95% of patients received sufficient information from their FCP on self-care relating to their MSK problem	YES
5	Patients should report improved MSK health at 3 months (as measured by achieving a minimal important change of 6 points on the MSK-HQ)	51% or more	54% of patients achieved a minimal important change of 6 points on the MSK-HQ at 3 months follow up	YES
6	Patients report being 'Likely' or 'Very likely' to recommend the FCP service to friends and family	80% or more	94% would recommend the FCP service to family and friends	YES

8	Patients in employment report receiving specific advice about work	75% or over	29% of those in employment reported receiving work advice from the FCP	NO
9	Patients will report less impact of their MSK condition on work performance at 3 months (as measured by the Stanford Presenteeism Scale)	51% or more	54% of patients reported less impact of their MSK condition on work performance at 3 months	YES