FRI0628

DIGITAL TECHNOLOGIES TO PROMOTE SELF-MANAGEMENT IN MUSCULOSKELETAL HEALTH: A SYSTEMATIC REVIEW

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Background: With the emergence of musculoskeletal conditions as a major threat to health status and one of the largest causes of health care expenditures, the role of self-management strategies has emerged. Digital media as a platform for self management interventions in musculoskeletal health is a new and evolving landscape in health care.

Objectives: To review the published evidence to support the self-management of rheumatic and musculoskeletal conditions through digital technologies.

Methods: MEDLINE, EMBASE, PsycINFO, Global Health, The Cochrane Library (Cochrane Database of Systematic Reviews, Cochrane Central Register of Controlled Trials (CENTRAL), Cochrane Methodology Register), and Web of Science (science and social science citation index) were searched and the papers selected were screened by two independent reviewers. Methodological validity prior to inclusion was assessed using the appropriate critical appraisal tools developed by the Critical Appraisal Skills Programme (CASP).

Results: Database searches identified 5179 studies. Five randomised controlled trials assessing digital media in the self management of musculoskeletal diseases were selected. The participants in the studies were predominately females with a mean age of 50. The mean number of participants in the studies was 140.8 (range 92–228). Two studies targeted self management strategies for patients diagnosed with rheumatoid arthritis [1, 2]. One study included fibromyalgia patients [3] and the two other studies included patients that reported arthritis pain [4] or general non cancer related pain [5]. A robust and meaningful comparison between the studies was infeasible because of heterogeneity between studies and small sample size in the studies. Positive effects of self-management were demonstrated in arthritis self-efficacy, pain, physical functioning, opioid misuse and overall quality of life.

Conclusions: All studies showed an improvement in a number of different self-management outcomes. Digital media may be effective in the delivery of self-management programmes of patients with rheumatic and musculoskeletal conditions. Further research is necessary to increase the scope of these findings using rigorous study designs so we can harness the full potential of digital technologies as a medium for delivering self-management interventions.

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FRI0629

PATIENT-TARGETED SMARTPHONE APPS FOR SYSTEMIC LUPUS ERYTHEMATOSUS: A SYSTEMATIC REVIEW AND ASSESSMENT OF FEATURES AND QUALITY

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Background: Smartphone apps are readily accessible eHealth tools that may support the self-management of patients with systemic lupus erythematosus (SLE). However, knowledge on the availability and quality of apps targeted to this population is limited.

Objectives: To identify smartphone apps targeted to patients with SLE and to classify their functions and assess their quality using a reliable and objective scale.

Methods: We applied a systematic review framework to the search, screening, and assessment of apps. Android and iPhone apps were searched on the Google Play Store and the App Store, respectively in January 2018. Search terms included "lupus" or "SLE". Apps were included if they were: (1) smartphone-based; (2) compatible with the Android or the iOS operating systems; (3) in the English language; (4) targeted to people with SLE; and (5) available for download in either of the two app stores. Apps were excluded if they were: (1) targeting a condition other than SLE; (2) including only treatment algorithms; or (3) explicitly only for health care providers. App name, platform (Android, iPhone), developer, current version, cost, and user star ratings and comments were extracted. The Mobile App Rating Scale was used to classify the apps.

Results: We identified 315 apps, including 249 from the Google Play Store and 66 from the App Store (figure 1). Of these, 32 met inclusion criteria (19 Android, 13 iPhone).

Of the 19 Android apps, 16 were free to download and the remaining cost 2.93 – 5.65 CAD. The focus across apps were mainly to increase patient well-being. The theoretical background or strategies behind the apps varied, the most common ones included: providing information/education regarding SLE for the user (14 apps), providing advice/tips/strategies/skills training for SLE management (9 apps), and providing capabilities for monitoring/tracking of symptoms (6 apps). The user star ratings of the apps ranged from 1.5 – 5.0 stars (out of 5.0) and the number of user ratings ranged from 1 – 288. Common user critiques indicated the need for increased functionality in entering and tracking symptoms in apps that provided this feature.

Of the 13 iPhone apps, 10 were free to download and the remaining cost 2.79 – 6.99 CAD. The focus across apps were mainly to increase patient well-being. The theoretical background or strategies behind the apps varied, the most common ones included: providing information/education regarding SLE for the user (9 apps), providing capabilities for monitoring/tracking of symptoms (6 apps), and providing advice/tips/strategies/skills training for SLE management (5 apps). No user ratings or comments were available.

Conclusions: Applying a systematic review framework, we identified and classified 32 apps mainly focusing on increasing patient well-being in SLE. These findings have practical implications for helping patients identify potential eHealth tools to support self-management of SLE.

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CAN COMMUNITY PHARMACY SERVICES BE THE MISSING LINK IN ACHIEVING EARLY DIAGNOSIS OF PSORIATIC ARTHRITIS?

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Background: There is an urgent need to look at New Models of Care to improve quality of care for patients whilst providing the best value for money. Community Pharmacy has been an untapped resource which can assist in achieving the goals of managing long term conditions. Psoriasis is one such example affecting 1% to 3% of the population with upto 40% of these patients at risk of developing psoriatic

arthritis (PsA). There is plenty of evidence that early diagnosis of PsA remains suboptimal leading to poorer outcomes.

Objectives: The objective of this proof-of-concept study was to utilise community pharmacists in collaboration with the local Rheumatology service to screen patients with psoriasis aiming to achieve earlier diagnosis of PsA.

Methods: A pilot site was identified including a community pharmacy with a neighbouring GP surgery. An educational session was organised with the team to help them understand the need for the project. Logistics were finalised and a dedicated teaching was delivered covering PsA and Psoriasis Epidemiology Screening Tool (PEST) tool. PEST was chosen for its high sensitivity and specificity and positive NICE recommendation.

The dispensing personnel highlighted all patients requesting prescribed standard psoriasis-treating topical applications to the pharmacists. They confirmed the history of psoriasis with the patients, ensured the absence of a formal diagnosis of arthritis and offered the PEST questionnaire. Those who scored positive were signposted to their GPs for further consultation. The data was gathered anonymously and analysed to assess the utility of the service.

Results: 37 patients were identified during the 12-week proof of concept phase. 24 (65%) participants were women. Median age of the group was 48 years (range 19–73). 23/37 (62%) were white Caucasians with eight Asian and three each of Afro-Caribbean or Mixed race background. 18/37 (48%) answered yes to three or more of five-question PEST tool thereby scoring positive. Ten (27%) replies were negative and another nine (24%) declined to participate. No reasons were offered for not filling in the questionnaire. Two of the positive patients have since been reviewed by GP and referred to Rheumatology for further evaluation.

Conclusions: To our knowledge, this is the first study ever conducted utilising community pharmacists to employ a screening questionnaire to help early identification of possible PsA patients. This novel approach of involving community pharmacy helps explore new and proactive ways of early detection of psoriasis patients at risk of PsA and challenges the traditional model of confining the screening process to GPs in primary care. Early findings have already identified nearly half of this cohort with hitherto potentially undiagnosed PsA. This pioneering development highlights a new model of care streamlining the diagnostic pathway thereby providing better quality of care. Considering over 90% of psoriasis is managed in primary care, it would also encourage quicker assessment by a rheumatologist without burdening the already busy GP practices. Focused strategy and better utilisation of community pharmacists can be pivotal to providing better care for PsA patients in the long term.

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FRI0631 WORKFORCE REQUIREMENTS IN RHEUMATOLOGY: A SYSTEMATIC LITERATURE REVIEW INFORMING THE DEVELOPMENT OF A WORKFORCE PREDICTION QUALITY APPRAISAL TOOL

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Background: Workforce requirement studies should be conducted in order to ensure the right number of people with the right skills, in the right place at the right time to deliver organizational objectives.

Objectives: As part of the EULAR project to develop points to consider for the conduction of workforce studies in rheumatology, we reviewed the literature on workforce prediction with the aim to develop a workforce prediction quality appraisal tool and apply it to existing studies in rheumatology.

Methods: Two literature searches were performed in Ovid MEDLINE, EMBASE, CINAHL, Cochrane Library and the grey literature comprising: (1) an update of a previous systematic literature review (SLR) of workforce prediction studies in rheumatology[1] and (2) a hierarchical SLR of workforce prediction studies in other medical fields. We extracted data on type of model used, details on need, demand and supply factors considered in the model, and other relevant aspects such as regional heterogeneity or uncertainty analyses. Based on the results, key

general as well as specific need/demand, and supply factors for workforce calculation in rheumatology were identified and each factor was assigned a quality level (low, moderate, high). The quality appraisal tool was applied to the existing workforce modeling studies in rheumatology.

Results: Data was extracted from 14 original workforce prediction studies in rheumatology and 10 SLRs in other fields. Studies used a variety of prediction models based on a heterogeneous set of need and/or demand and/or supply factors. While only a few studies attempted to empirically validate the prediction quality of the model (n=3), the consensus was that an integrated model including all these factors is expected to have the highest validity. Based on the different factors considered in existing studies, our quality appraisal tool included the three groups of factors: general factors (e.g. type of the model, stakeholder involvement), need/demand factors (e.g. scope of diseases covered by rheumatologists, morbidity, demography) and supply factors (e.g. time dedicated to clinical work, entry to profession, demographic composition of workforce) (table 1). The majority of studies scored low or moderate on most of the factors.

Table 1 Workforce prediction quality appraisal tool

Factor*	Evidence grading	N of studies
General factors		
Type of model	Low: model that was only based on demand or need or supply factors Moderate: integrated model that considered demand, need and supply (supply (s)=demand (d) at baseline) High: integrated model that considered demand, need and supply (s<=>d at baseline)	N=4 N=6 N=4
Regional heterogeneity	Low: regional heterogeneity was not considered Moderate: calculations were performed on national level but anticipated regional discrepancies are discussed High: calculations took into account relevant regional profile of the country	N=8 N=4 N=2
Need/demand factors		
Scope of diseases covered by rheumatology specialty	Low: either not listed or not deemed representative (e.g. insufficient number of disease groups, unjustified author's estimate etc.) Moderate: stated but the probability that they are representative is limited High: stated and the probability that they are representative is high	N=3 N=5 N=6
Projection of population development	Low: not considered or only size of population is included Moderate: age or/and sex structure and/or other factors were included but using single data source and not relying on published statistics High: age or/and sex structure and/or other factors were included using more than one source and relying on published statistics or national population projections	N=6 N=8 N=0
Supply factors		
Time spent on clinical (rheumatologic) care	Low: not considered Moderate: % of time dedicated to clinical duties was defined without detailed estimation of number, duration, and type of visit OR % of time dedicated to clinical duties was calculated through estimating the number, duration and type of visits, but using single data source High: % of time dedicated to clinical duties was calculated through estimating the number, duration and type of visits, using more than one published data source	N=4 N=10 N=0
Demographic trends in workforce	Low: not considered Moderate: one demographic trend (e.g. ageing, feminization, millennial trend) was considered High: more than one demographic trends were considered	N=6 N=3 N=5

* 6 out of the 21 factors of the tool are depicted in this excerpt

Conclusions: The existing evidence on workforce prediction in rheumatology and other fields is scarce, heterogeneous and of low or moderate quality. The workforce prediction quality appraisal tool will enable future evaluation of workforce prediction studies. This review informs the EULAR points to consider for the conduction of workforce requirement studies in rheumatology.

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FRI0632 IMPACT OF A TIGHT CONTROL MULTIDISCIPLINARY RHEUMATOLOGY PROGRAM ON THE QUALITY OF LIFE OF PATIENTS WITH AUTOIMMUNE DISEASES IN COLOMBIA

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Background: Autoimmune diseases are chronic inflammatory pathologies of complex etiology and variable clinical expression that usually affect young individuals, generating chronic pain and altering their functionality. Therefore, one of the mainstays of the treatment is to improve the quality of life (QoL) of these patients

Objectives: To determine the impact of a tight control multidisciplinary rheumatology program in the QoL of patients with rheumatoid arthritis (RA), Systemic lupus erythematosus (SLE) and seronegative spondyloarthropathies (SpA).

Methods: A analytical quasi-experimental study was conducted were 3812 patients with RA, 590 patients with SLE and 605 patients with SpA were included and followed between February 2015 and December 2016. Two separated measurements of QoL were developed through the EuroQoL Five Dimensions Questionnaire (EQ-5D) by time trade-off (TTO) valuation technique and the visual analogue scale valuation technique (EQ-VAS). Sociodemographic characteristics