

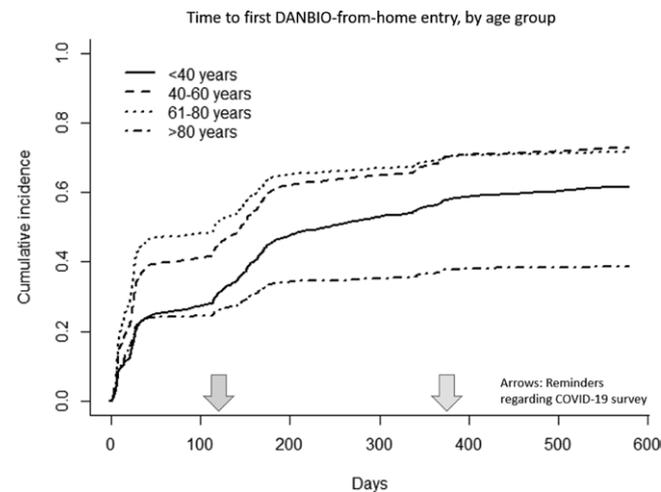
(1.8 (1.6;2.0)) or 61-80 yrs (1.9 (1.7;2.19) and not age >80 yrs (0.6 (0.5;0.7) with age <40 as the reference), biologic treatment (1.4 (1.3;1.5)), higher HAQ (1.3 (0.3;1.4)), scoring PASS 'no' (1.1 (1.02;1.2)) (all p <0.001), whereas disease duration and diagnosis had no impact.

Time to first entry was longest in in patients >80 yrs followed by the <40 yrs group. For all age-groups, and most pronounced for age <40 yrs, the use increased when invitations to questionnaire surveys were sent out. (Figure 1)

Conclusion: A web-based system for secure remote entry of PROs was well-received after a nationwide launch. Patient-related factors had a substantial impact on the use. Lower use in the elderly might indicate lack of technical skills or facilities, whereas low use in younger age groups, which improved over time, is likely driven by other factors. Further analyses are planned to explore if lack of use impacts treatment outcomes.

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POS0374 MONITORING CHRONIC INFLAMMATORY MUSCULOSKELETAL DISEASES WITH A PRECISION DIGITAL COMPANION PLATFORM(TM)—RESULTS OF THE DIGIREUMA FEASIBILITY STUDY

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Background: Patients with rheumatic and musculoskeletal diseases (RMDs) require a tailored follow-up that is limited by the capacity of healthcare professionals. Innovative tools need to be implemented effectively in the clinical care of patients with RMDs.

Objectives: To test the feasibility of a Precision Digital Companion Platform™ for real-time monitoring of disease outcomes in patients with rheumatoid arthritis (RA) and spondyloarthritis (SpA).

Methods: Digireuma was a prospective study including patients with RA and SpA, using the digital Precision Digital Companion Platform, Adhera for Rheumatology (ISRCTN11896540). During a follow-up of 3 months, patients were asked to report disease specific electronic patient reported outcomes (ePROs) on a regular basis

in the mobile solution. Two rheumatologists monitored these ePROs and, patients were contacted for online or face-to-face interventions when deemed necessary by clinicians (Figure 1). Assessment measures included patient global assessment (PGA) of disease activity, tender joint count (TJC), swollen joint count (SJC), Health Assessment Questionnaire (HAQ) and pain visual analogue scale (VAS), for patients with RA; VAS, PGA, TJC, SJC, Bath Ankylosing Spondylitis Disease Activity Index (BASDAI), Bath Ankylosing Spondylitis Functional Index (BASFI) and ASAS Health Index (ASAS-HI), for patients with SpA. In addition, flares, changes in medication and recent infections were asked. Usability of the digital solution was measured by the Net-Promoter Score (NPS).

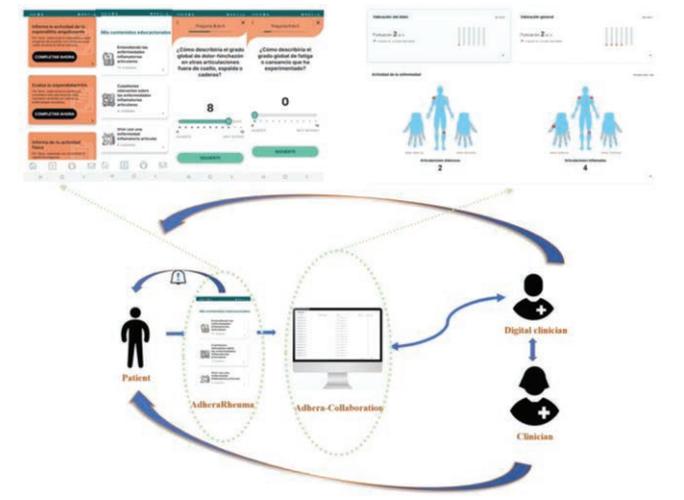


Figure 1. Digital monitoring in the study powered by Adhera for Rheumatology. Screenshots in top depict the mobile interface (left) and clinical web application (right)

Results: Forty-six patients were recruited of whom 22 had RA and 24 SpA. Mean age was 48 ± 12 and 42 ± 9 years in the RA and SpA groups, respectively. 18/22 (82%) patients with RA and 9/24 (38%) with SpA were female. Among the total included patients, 41 (89%) completed the onboarding (18/22 (82%) RA, 23/24 (96%) SpA) and 37 (80%) submitted at least one entry. In the RA group who completed the onboarding (n=18) there were a total of 4019 total interactions (2178 questionnaire items, 648 accesses to educational units, 105 quizzes, 1088 rated messages), while patients with SpA (n=23) had a total of 3160 interactions (1637 questionnaire items, 684 accesses to educational units, 77 quizzes, 762 rated messages). ePROs measurements completion rates for RA and SpA patients that completed any data during follow-up are shown in Table 1. Patients with RA completed a median of 9.5 ePROs during follow-up, whereas patients with SpA completed a median of 3. Regarding alerts, 15 patients generated a total of 26 alerts, of which 24 were flares (10 RA, 14 SpA) and 2 were problems with the medication (1 RA, 1 SpA). 18 (69%) of the alerts were managed remotely, 5 (19%) required a face-to-face intervention and in 3 (12%) patients did not respond before the consultation. Regarding usability and patient satisfaction, 14 patients provided feedback. According to the NPS, 9/14 were considered promoters, 4/14 passives and 1/14 detractor. The overall rating of these 14 patients for the app was 4.3 out of 5 stars.

Table 1. Onboarded patient engagement with regards to e-PROs

	Rheumatoid Arthritis (n=18)					Total
	PGA	TJC	SJC	VAS	HAQ	
ePROs completed	1.5 (0.25, 3)	2 (0.25, 3)	2 (0.25, 3)	2 (0, 3)	2 (1, 3)	9.5 (4.3, 15.8)
Patients with ≥ 1 entry	13 (72.2)	13 (72.2)	13 (72.2)	12 (66.7)	16 (88.9)	16 (88.9)
	Spondyloarthritis (n=23)					Total
	PGA	TJC	SJC	BASDAI	ASAS-HI	
ePROs completed	1 (0,3)	1 (0,3)	1 (0,3)	1 (0,2)	1 (0,2)	3 (1, 12)
Patients with ≥ 1 entry	16 (69.5)	16 (69.5)	16 (69.5)	14 (60.8)	14 (60.8)	21 (91.3)

Follow-up period was 3 months. Results are expressed in median (Q1, Q3) and n (%)

Conclusion: This study shows that the use of a digital health solution is feasible in clinical practice. Based on these preliminary results, the next step will be to further implement the Precision Digital Companion Platform, Adhera for Rheumatology, in a multicentric setting to analyze the added value for monitoring patients.

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POS0375

EVALUATION OF PATIENTS WITH RHEUMATOID ARTHRITIS IN TELECONSULTATION DURING THE FIRST WAVE OF THE COVID-19 PANDEMIC

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Background: The sudden emergence of SARS-CoV-2 onto the world stage has accelerated a major change in the management of patients with chronic rheumatic diseases and has catalyzed the rapid emergence of telemedicine.

Objectives: Our aim was to describe which parameters were used by rheumatologists to monitor patients with rheumatoid arthritis (RA) in teleconsultation during the first wave of the pandemic and identify the most relevant for decision making.

Methods: Retrospective monocentric routine care cross-sectional study including RA patients seen in teleconsultation between March and September 2020. Available parameters assessing disease status were collected in teleconsultation files. Clinician intervention was defined by treatment escalation and/or the need for a rapid face-to-face consultation or day hospitalization.

Results: 143 RA patients were included (117 females, mean age of 58±16 years, mean disease duration of 14±11 years). The presence or absence of patient self-reported RA flares was mentioned in all medical files, followed by the presence and/or the number of tender joints (76%), the duration of morning stiffness (66%), the number of pain-related nocturnal awakenings (66%) and the CRP value (54%). Patient self-reported RA flares concerned 43/143 patients (30%). The presence of self-reported RA flares was associated with a more detailed evaluation of patient in teleconsultation: The presence (or number) of tender joints and swollen joints were more significantly reported in patients who presented a flare (39/43, 91% vs. 70/100, 70%, p=0.008 and 25/43, 58% vs. 23/100, 23%, p<0.001, respectively). Teleconsultation led to a clinician intervention in 22/143 patients (14%), representing 51% of patients with self-reported flares (22/43 patients). Therapeutic escalation was necessary in 13 patients: introduction or dose increase of corticosteroids in 8 patients, introduction or dose increase of methotrexate in 4 patients and introduction of hydroxychloroquine in 1 patient. Face-to-face consultation or day hospitalization were organized for 10 patients. Active disease was confirmed during this next face-to-face visit in 9 patients, with DAS28 ranging from 3.35 to 5.62, leading to therapeutic modification. The 133 other patients were seen in face-to-face consultation 6±2 months after the teleconsultation. No DMARD modification was recorded during this next face-to-face consultation. The following variables were associated with clinician intervention during the teleconsultation in univariate analysis: patient self-reported RA flares since the last visit (p<0.001), CRP >10mg/mL (p=0.012) and a morning stiffness > 30 minutes (p<0.001). Multivariate analysis confirmed RA flares (Odds Ratio, OR: 15.6 95% CI 3.37-68.28) and CRP values >10mg/L (OR: 3.32, 95% CI 1.12-13.27) as the variables independently associated with clinician intervention.

Conclusion: Our study identified patient reported RA flares and increased CRP values as 2 red flags in teleconsultation, independently associated with therapeutic modification and/or the need for a rapid face-to-face consultation. These indicators may help clinician's decision making in teleconsultation.

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POS0376

THE ROLE OF ELECTRONIC CONSULTATION IN THE EARLY DIAGNOSIS OF INFLAMMATORY ARTHROPATHIES IN A THIRD LEVEL HOSPITAL

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Background: The relevance of early diagnosis in rheumatic inflammatory diseases is well known. Electronic consultation (e-Consults) is a tool for communication

between primary health care (PHC) and hospital care (HC) physicians in order to present the cases of patients. It has proven to resolve cases without on-site consultations and to facilitate quick access to conventional consultations.

Objectives: To evaluate whether e-Consults is an effective tool in the early diagnosis of inflammatory arthropathies

To evaluate whether the clinical suspicion of the rheumatologist correspond to the final diagnosis.

Methods: Retrospective, observational study of all e-Consults carried out during 2021 in the hospital area *Virgen Macarena*. All e-Consults were carried out by means of a computer program as a clinical extension of the research project E-Hermes for the implementation of e-Consults. The analysis focused on those e-Consults in which the rheumatologist suspected rheumatoid arthritis (RA), psoriatic arthritis (PsA) and spondylarthritis (SpA) in comparison with the final diagnosis. The on-site consultations and waiting time for appointments were also analyzed.

Results: During 2021, the number of e-Consults received was 733. Inflammatory arthropathy was suspected in 54 (7.4%). RA was suspected in 55.9% of the cases, PsA in 17.6% and SpA in 26.5% of the cases. 67.6% of the patients were women with an average age of 53.15 (± 17.06). 87.3% were recalled for an on-site consultation. Of these, 76.5% were given a preferential appointment and 11.8% were given a regular appointment. The waiting time for the preferential appointment was 18.5 days on average and 39 days for the regular appointment. 73.7% of the patients with suspected RA were women with an average age of 55.16 years (± 16.8). The reasons for consultation were: joint swelling (89.5%), polyarthralgia (5.3%) and hand pain (5.3%). The diagnosis of RA was confirmed in 47.4% of the suspected cases and only 27.7% showed no inflammatory joint pathology. 83.3% of the suspected PsA cases were women with an average age of 53 years (± 12.6). Joint swelling was the most frequent reason for consultation (50%) followed by polyarthralgia, lumbar back pain and hand pain (16.7%, respectively). The diagnosis of PsA was confirmed in 33.3% of the suspected cases.

55.6% of the patients with suspected SpA were men with an average age of 49 years (± 20.8). The most frequent reasons for consultation were: joint swelling (44.4%) and lumbar back pain (33%). The suspected diagnosis of SpA was confirmed in consultation in 44.4% of the patients and only 33.3% of the suspected cases showed no inflammatory pathology.

After all 733 e-Consults performed in 2021, 14 patients (2%) were diagnosed with RA, 5 (0.7%) were diagnosed with PsA and 6 (0.9%) with SpA, which means a 3.5% diagnosis of inflammatory arthropathy by means of e-Consults. The hospital area *Virgen Macarena* serves 481,296 inhabitants. Considering that the incidence per 100,000 patients/year is 8.3 for RA, 3.6 for PsA and 7.2 for SpA^{1,2}, the number of new cases expected in our area are as follows: 40 for RA, 17 for PsA and 5 for SpA. The proportion of cases diagnosed by TC were 36% for AR, 27.7% for PsA and 18.5% for SpA, corresponding to the reference population.

Conclusion: The suspected diagnosis of the rheumatologist in the e-Consults was confirmed for inflammatory joint pathologies in almost half of the cases.

E-Consults is a useful tool to identify inflammatory joint processes that need evaluation in an on-site consultation.

E-Consults is an efficient method for the early detection of high-impact rheumatic diseases, facilitating quick access to those patients and minimizing diagnostic time.

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