Only a minority (<10% in both groups) believed that digitalisation has a negative impact on the patient-doctor relationship.

Conclusion: The COVID-19 pandemic instigated an increase in patients' and rheumatologists' acceptance and usage of DHAs, possibly introducing a permanent paradigm shift in the management of RMDs.

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POS1459-HPR IDENTIFYING MEANINGFUL CHANGE IN THE RA FLARE QUESTIONNAIRE SCORES IN RHEUMATOID ARTHRITIS

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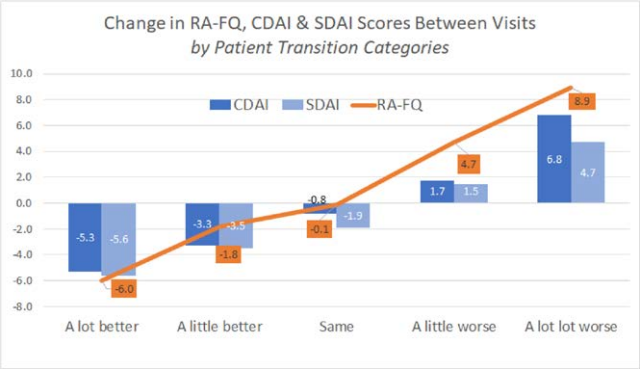
Background: The RA-FQ is a patient-reported measure of current disease activity in RA that can be used to identify disease flares. The RA-FQ queries pain, physical function, fatigue, stiffness, and participation and yields a score from 0-50. We previously reported on reliability, validity, and responsiveness.

Objectives: To identify changes in RA-FQ that represent minimal and meaningful improvement or worsening from the perspective of people with RA, treating rheumatologists, and in relation to disease activity indices. We hypothesized that

Methods: Data were from adults with early RA (sx <1 year) enrolled in the Canadian Early Arthritis Cohort, a prospective study of real-world patients treated across Canada. Participants completed the RA-FQ, Patient Global, and RA transition item since last visit (a little vs. a lot better or worse or same) between consecutive 3- and 6-month visits. Rheumatologists recorded joint counts, MD Global, and change in RA. We compared mean change across improvement and worsening using patient anchors and disease activity indicators.

Results: The 808 adults were mostly white (84%) women (71%) with a mean (SD) age of 55 (15) and moderate-high CDAI level (85%) at enrollment. Most (79%) reported their RA had changed; 59% were better and 20% worse. Patients who were *a lot worse* had a mean increase of 8.9 points whereas those who rated themselves as *a lot better* had a -6.0 decrease on the RA-FQ (Figure 1). Minimal worsening and improvement were associated with 4.7 and -1.8 change in RA-FQ scores, respectively, while patients who rated their RA unchanged had stable RA-FQ scores (Table 1).



Similar changes were evident in CDAI, SDAI, and DAS indices (Table 1). Larger differences were observed with patient vs. physician global scores and tender vs. swollen joints. Across measures, the change associated with worsening was greater than for improvement. Results supported all prespecified hypotheses ab.

Table 1. Change in RA-FQ scores between visits by patient rating of RA status.

	A Lot Better (N=346; 43%)			A Little Better (N=132; 16%)			The Same (N=174; 21%)			A Little Worse (N=94; 12%)			A Lot Worse (N=62; 8%)		
Domain	Δ	95% CI	SD	Δ	95% CI	SD	Δ	95% CI	SD	Δ	95% CI	SD	Δ	95% CI	SD
RA-FQ Total (0-50)	-6.0	(-7.1, -4.9)	10.3	-1.8	(-3.2, -0.3)	8.4	-0.1	(-1.3, 1.1)	8.1	4.7	(2.9, 6.6)	9.1	8.9	(5.1, 12.7)	15.0
Pain	-1.2	(-1.4, -0.9)	2.4	-0.4	(-0.8, 0.0)	2.3	0.0	(-0.2, 0.3)	1.8	1.3	(0.8, 1.7)	2.2	2.0	(1.2, 2.9)	3.3
Physical Function	-1.3	(-1.6, -1.1)	2.4	-0.3	(-0.6, 0.1)	2.1	0.0	(-0.3, 0.3)	2.1	0.9	(0.4, 1.4)	2.4	1.8	(0.8, 2.7)	3.7
Fatigue	-1.1	(-1.4, -0.8)	2.6	-0.4	(-0.7, 0.0)	1.9	0.0	(-0.3, 0.3)	2.1	0.7	(0.3, 1.1)	2.1	1.3	(0.5, 2.1)	3.2
Stiffness	-1.1	(-1.4, -0.9)	2.4	-0.4	(-0.7, 0.0)	2.0	-0.1	(-0.4, 0.2)	2.0	1.1	(0.6, 1.5)	2.2	1.8	(1.0, 2.7)	3.3
Participation	-1.2	(-1.5, -1.0)	2.5	-0.1	(-0.5, 0.3)	2.1	-0.1	(-0.4, 0.2)	2.2	0.8	(0.4, 1.3)	2.2	2.0	(1.1, 2.8)	3.4
Disease Activity															
CDAI*	-5.3	(-6.3, -4.3)	9.1	-3.3	(-5.4, -1.3)	11.5	-0.8	(-2.0, 0.5)	8.1	1.7	(-0.1, 3.5)	8.8	6.8	(3.7, 9.8)	12.0
SDAI	-5.6	(-6.8, -4.4)	9.2	-3.5	(-6.1, -0.9)	12.2	-1.9	(-3.6, -0.2)	8.9	1.5	(-0.7, 3.7)	9.2	4.7	(1.0, 8.4)	12.2
DAS28-CRP	-0.7	(-0.8, -0.6)	1.01	-0.5	(-0.7, -0.2)	1.2	-0.2	(-0.4, 0.0)	1.0	0.3	(0.1, 0.5)	1.0	0.5	(0.2, 0.9)	1.2
Patient Global (0-10)	-1.3	(-1.5, -1.0)	2.7	-0.5	(-0.9, -0.1)	2.1	-0.1	(-0.4, 0.2)	2.1	1.3	(0.8, 1.8)	2.4	2.9	(2.1, 3.6)	3.1
MD Global (0-10)	-1.2	(-1.4, -1.0)	1.9	-0.7	(-1.1, -0.3)	-0.1	-0.1	(-0.4, 0.2)	1.9	0.1	(-0.3, 0.5)	2.8	0.7	(0.0, 1.5)	2.8
Swollen Joints (28)	-1.4	(-1.7, 1.0)	3.2	-1.0	(-1.8, -0.2)	4.6	-0.4	(-0.9, 0.0)	3.0	0.0	(-0.7, 0.7)	3.4	1.3	(0.2, 2.5)	4.6
Tender Joints (28)	-1.5	(-1.9, -1.1)	3.9	-1.3	(-2.2, -0.3)	5.5	0.0	(-0.7, 0.6)	4.3	0.3	(-0.7, 1.2)	4.5	2.2	(0.8, 3.5)	5.4

Conclusion: In this large cohort of adults with ERA, the RA-FQ was responsive to change and generally distinguish between minimal and meaningful improvement and worsening. These data add to a growing evidence demonstrating robust psychometric properties of the RA-FQ and offer

initial guidance about the amount of change associated with improvement or worsening, supporting its use in RA care, research and decision-making.

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POS1460-HPR MYRA TOUCH FOR DISEASE ACTIVITY EVALUATION IN RHEUMATOID ARTHRITIS: A COMPARISON OF PATIENT-REPORTED OUTCOMES WITH PHYSICIAN'S ASSESSMENT

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Background: Patient-reported outcomes (PROs) have become an essential component of patients' assessment in the management of Rheumatoid Arthritis(RA).They have been reported to be at least as informative if not more than physician assessed outcomes.

MyRA Touch was pioneered by the Rheumatology Unit of Hospital Tuanku Jaa'far in Seremban Malaysia in March 2018,to engage and empower all RA patients on their own disease activity monitoring. It is an electronic platform, designed to enhanced the application of electronic patient reported outcomes (ePROs) among RA patients where they examine and record their own painful and/or swollen joints for DAS28 calculation and report their health assessment through Routine Assessment of Patient Index Data with 3 Measures (RAPID 3).MyRA Touch is an applications (App) that is user friendly and available in four major spoken languages (English, Chinese, Malay and Tamil) with an animated version for patients who are illiterate.

Objectives: The objectives of this study are to determine the correlation between:

I)Patient-reported and physician reported DAS28 ESR/CRP
II)RAPID3 and Clinical Disease activity Index (CDAI)
III)RAPID3 and DAS28 ESR/CRP assessed by physician and patient
IV)RAPID3 and inflammatory markers ESR/CRP.

Methods: This was a cross-sectional study carried out in the Rheumatology Unit of Hospital Tuanku Jaa'far. All data entered through MyRA Touch App from April 2018 till April 2020 was analysed.

Results: There were a total of 562 patients who entered the data in the App, 87.9% were women. The ethnic compositions of the study subjects comprised of Indians (36.7%) followed by the Malays (34.7%),Chinese (26.3%) and other ethnics (2.3%). About half of patients (59.8%) were in the 51-70 age group whereas 22.9%,1.8% and 15.5% were in the 31-50,18-30 and above 70 age groups respectively. The majority of our patients (96%) were literate. A total of 54.3% of them received secondary education, 27% primary, 12.2% tertiary and 6.6% did not receive any formal education.

There was a high level of correlation between DAS28 ESR/CRP performed by patient and DAS28 ESR/CRP assessed by physician, (r=0.808 for DAS28 ESR and r=0.804 for DAS28 CRP). RAPID3 also showed high level of correlation with CDAI and DAS28 CRP assessed by patient (r=0.700 and r=0.718 respectively). There was a moderate correlation between DAS28 ESR/CRP done by physician with RAPID3 (r=0.656 and r=0.696 respectively).RAPID3 demonstrated little correlation with inflammatory markers ESR and CRP (r=0.141 and r=0.171 respectively).

Conclusion: PROs via DAS 28 (ESR/CRP) and RAPID3 showed moderate to high correlation with disease activity assessed by physician. We can empower patients to perform their own disease assessment by using the MyRA Touch App before seeing their physician and the information provided in the App, can help to reduced consultation time. During the COVID-19 pandemic, telemedicine is very much encouraged. By using the MyRA Touch, patients can assess their own tender and swollen joint count on a homunculus, evaluate their own physical function, health and pain using the RAPID3 parameters. The information obtained from the PROs in the MyRA touch App enables the physician to make a more comprehensive virtual assessment of the patient's condition which helps in treatment decision making. In conclusion, MyRA Touch is an useful tool for disease activity measurement by patient.

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POS1461-HPR THE DEVELOPMENT OF A NOVEL EPRO DELIVERY SYSTEM TO MEASURE PATIENT QUALITY OF LIFE IN ROUTINE CLINICAL CARE: AN ANALYSIS OF 5 YEARS OF EXPERIENCE

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Background: Registry studies and clinical trials are increasingly incorporating patient reported outcomes (PROs) to measure the full burden of disease and better measure the efficacy and value of medicines; however, the burden of paper-based surveys, time constraints, and privacy concerns impede the widespread use of PROs in routine clinical care.

Objectives: To develop a simple and secure technological solution to incorporate validated PROs into routine clinical care for patients with rheumatic diseases, and to assess the patient response to functional assessment of chronic illness therapy fatigue (FACIT-F), patient health questionnaire-2 (PHQ-2), and healthcare resource utilization (HCRU) questionnaires delivered using this ePRO method.

Methods: A novel ePRO questionnaire delivery system was developed by Software4Specialists in partnership with OPAL Rheumatology. Validated PRO questionnaires were sent from the patient's electronic medical record (Audit4, Software4Specialists) and delivered to the patient's email address at time intervals specified by the rheumatologist (defaults to quarterly) or completed in the clinic waiting room prior to the consultation using a tablet or the patient's smart phone (in-practice). Completed questionnaires were encrypted and returned directly to the patient's Audit4 electronic medical record held on the clinician's server for review at the next clinical consultation. The link to the PRO questionnaire expired within 28 days if the questionnaire was not completed, and the questionnaires were automatically cancelled if 2 consecutive links expired. This technology was made available to up to 111 rheumatologists located in 42 clinics in 6 states/territories in Australia, and the use of this technology to furnish the clinical consultation was voluntary for clinicians and patients. Deidentified clinical data was extracted from the servers of participating rheumatologists and aggregated across all sites.[1] Data collected between April 2016-Dec 2020 was analysed descriptively.

Results: Between April 2016-Dec 2020, 99,505 FACIT-F, PHQ-2 and HCRU questionnaires have been delivered to 5,784 patients from 39 of 42 contributing clinics (93%). 85% of questionnaires were delivered via email and 15% in-practice. Overall, 85% of patients completed at least one questionnaire, and of all questionnaires sent, 73% were completed. These rates have remained consistent over time. The completion rates were higher when questionnaires were delivered to patients in-practice compared to email (96% vs 69%). Females were more likely to engage with the questionnaires than males (87% vs 81%), and older patients were slightly more likely to complete all questionnaires delivered. 69% of questionnaires sent via email were completed on the day they were delivered and 94% were completed within 7 days. The median (IQR) number of questionnaires completed per patient was 3 (1,7) and the median (IQR) time since the first questionnaire was completed was 13 months (5,26).

Conclusion: The novel Audit4 ePRO delivery system is an effective tool for incorporating PROs into routine clinical care to capture data directly from the patient on the impact of their condition on their quality of life. The data generated provides a unique opportunity to understand the full burden of disease for patients in the real-world setting and the impact of interventions.