Conclusion: A few conclusions can be drawn from this work. Firstly, prevalence of vaccination increased after clinic creation, especially for Pneumococcal vaccine polyvalent, Influenza virus, Hepatitis A and B. We would expect the same results in the remaining vaccines in a broader population. Our results were also affected by stock rupture in our country. Secondly, this study shows the importance of a protocol, which helps systemise assessment of infectious risk before biological therapy, by analysing thoroughly vaccination history and keeping it updated. Lastly, shared responsibility between rheumatologists and infectiologists enables them to leverage their skills and focus, leading to ultimate gains for the patient. We hope this work motivates colleagues to start similar practices in their centres.

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AB1153

ANALGESIC AND ANTI-INFLAMMATORY DRUG USE IN PATIENTS WITH RHEUMATOID ARTHRITIS, PSORIATIC ARTHRITIS AND SPONDYLOARTHRITIS VERSUS CONTROLS IN A BELGIAN GENERAL PRACTITIONER REGISTRY.

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Background: Rheumatoid arthritis (RA), psoriatic arthritis (PSA) and spondyloarthritis (SPA) are the most common inflammatory rheumatic diseases. Pain is the hallmark symptom in these conditions and pain relief is ranked first amongst preferred outcomes by patients. Level of analgesic and anti-inflammatory drug use is unknown in these populations in Belgium.

Objectives: To compare analgesic and anti-inflammatory drug use in patient populations of RA, PSA and SPA versus controls in a General Practitioners (GP) setting in an era of expanding treatment possibilities in rheumatology.

Methods: Data were obtained from Intego over a 13-year time interval from 1999 to 2012. Intego is a Flemish GP-based morbidity registration network hosted at the Academic Center for General Practice of the KU Leuven, covering 2% of the Flemish general population. Patients classified under the International Classification of Primary Care codes L88 (rheumatoid/sero-positive arthritis) and L99 (musculoskeletal disease other) were selected for this study. Experienced rheumatologists verified if the keywords mapped to these codes corresponded to a diagnosis of RA/SPA/PSA. The date of these diagnoses in Intego was considered "baseline". Controls were matched on age, gender, baseline date and GP practice in a 4:1 case ratio. Intego registers all electronic drug prescriptions by the GP. Anytime use of glucocorticoids, NSAIDs, opioids except tramadol, tramadol and paracetamol in the first 3 years after diagnosis is presented. Proportions of patients and controls on analgesic and anti-inflammatory drugs were compared by Chi-Square analyses.

Results: Over a 13-year period, 738, 229 and 167 patients were included with a diagnosis of RA, SPA or PSA, respectively. Table 1 presents the medication use of these populations. The three conditions had statistically significantly more prescriptions for all types of analgesic and anti-inflammatory drugs compared to controls. Approximately 70% of patients with an inflammatory rheumatic condition received mild pain medication (NSAIDs, Tramadol and Paracetamol) in the first three years after diagnosis. To note is the high use of opioids, even excluding tramadol, in these populations ranging up to 15%.

Table 1. 3-year analgesic and anti-inflammatory drug use in RA, SPA and PSA patients versus controls

Medication	RA	RA Control	SPA	SPA Control	PSA	PSA Control
Number of patients	738	2952	229	916	167	668
Glucocorticoids	241(33%)	348(12%)	29(13%)	70(8%)	47(28%)	67(10%)
NSAIDs	455(62%)	1156(39%)	161(70%)	340(37%)	114(68%)	267(40%)
Opioids	109(15%)	263(9%)	31(14%)	53(6%)	24(14%)	45(7%)
Tramadol	87(12%)	150(5%)	22(10%)	28(3%)	16(10%)	26(4%)
Paracetamol	233(32%)	598(20%)	63(28%)	165(18%)	51(31%)	141(21%)
Total analgesic and anti-inflammatory drug use	506(69%)	1409(48%)	172(75%)	407(44%)	121(72%)	309(46%)

RA= Rheumatoid arthritis, PSA= psoriatic arthritis, SPA= spondyloarthritis. Total analgesic and anti-inflammatory drug is the sum of NSAIDs, Tramadol and Paracetamol. Anytime use of drugs are presented.

Conclusion: Frequent analgesic and anti-inflammatory drug use in patients with a chronic inflammatory joint condition is to be expected, and underlined by the results of our study. Remarkably is the high use of opioids, even excluding tramadol, in patients with RA, PSA and SPA in an era of effective disease modifiers, as well in the control population. Our data shows that around 9% of the Belgian population receives at least once over a 3-year period an opioid prescription. As our data only registers electronic GP prescriptions, this is likely to be an underestimation of the true prescription proportion. Detailed analyses on dose and duration of analgesic and anti-inflammatory drugs will follow.

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AB1154

EHR-INTEGRATED PATIENT-GENERATED HEALTH DATA FOR SYMPTOM MONITORING IN LONG-TERM CONDITIONS: A SYSTEMATIC REVIEW

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Background: Patients with long-term conditions (LTCs), including many RMDs, often require continuous management of care. Patient-generated health data (PGHD) collected between visits could inform ongoing care management and provide important insights into patient health and well-being. There is increasing interest in integrating PGHD in electronic health records (EHRs). However, integration is still largely aspirational with limited evidence of successful systems.

Objectives: To map the landscape of EHR-integrated remote symptom monitoring systems in the field of LTCs. The objectives were to 1) characterise state of the art systems, 2) describe their clinical use, and 3) outline anticipated and realized benefits for clinical practice.

Methods: A systematic search was conducted in three electronic databases up until November 2019. Titles and abstracts were independently screened by two reviewers. One reviewer screened full-text articles, identified those relevant for review and extracted data. Inclusion criteria included 1) symptom reporting systems in adult patients suffering a LTC, 2) integration of data into the EHR, 3) symptom data collected remotely, 4) evidence of use in clinical care. We did not exclude studies based on study design, quality, or sample size. Synthesis focused on describing system specifications and their use. For objective three we adopted a list of outcome indicators [1], which each of the studies were assessed against.

Results: The initial search yielded 2040 articles. Only 12 studies reporting on ten unique systems were identified. Two systems were used in rheumatology, but the majority were used in oncology. Systems were highly heterogeneous in terms of technical and functional specifications. Nine systems were fully integrated (data viewable in the EHR) while the remaining system represented a partial integration (data viewable via link in the EHR). Five systems allowed repeated data collection at

pre-defined intervals between visits with frequencies varying from daily to monthly. The remaining five made a single request before a scheduled clinic visit. The number of items requested from patients ranged from 9-48 per session. We identified three different clinical workflows: Simple (data only used during consultation, n=5), moderate (real-time alerts for providers when severe symptoms were reported, n=4) and on-demand (patient-initiated visits, n=1). Benefits of symptom reporting from each of the studies were categorised as anticipated, realized quantitative, and realized qualitative. We present summarised counts of these benefits in Figure 1. The most common anticipated benefits were better communication, changes to patient management and improved health outcomes. Most common realized benefits were detecting unrecognised problems and changes to patient management.

Figure 1. Summarized counts of benefits from each included study assessed against Chen et al.'s 10 outcome indicators. Categorized in anticipated (orange), realized quantitative (light purple), and realized qualitative benefits (dark purple).

Conclusion: There is growing interest and urge for integrating symptom data in the EHR and clinical care. Yet, this review has illustrated that there are limited published efforts to learn from. The heterogeneity in approaches underpins the need for a common framework. There is growing evidence from qualitative work in support of remote symptom-reporting in enabling better and patient-centred care in LTCs. The next step will be for robust, quantitative studies to provide evidence of benefits.

References:

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AB1155 WORK DISABILITY AND PREDICTORS OF POOR WORK OUTCOME IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS

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Background: Axial spondyloarthritis (axSpA) is a chronic inflammatory disease which may lead substantial functional limitation. The disease more commonly affects men in their third decade of life. For patients with chronic disease participation in paid work may be the result of series factors like disease severity, effectiveness of the health care, availability and the type of work. Previously it was reported that ankylosing spondylitis may cause adverse work outcome.

Objectives: To understand the impact of axSpA on work disability and the factors associated with poor work outcome.

Methods: A cross-sectional survey was performed among 323 patients with axSpA according to ASAS classification criteria from one tertiary center. In total 219 (67.8%) patients were working age at the time study. The others were student, housewife or retired. Demographic, social and disease related characteristics were collected. Characteristic that might be associated with premature work loss were evaluated by univariable and multivariable logistic regression analysis.

Results: Out of 219 axSpA patients (155 [71%] r-axSpA and 64 nr-axSpA, 69% HLA-B27 positive) who have a work at least once 47 (22%) was either withdrawn from work (n=35) or retired due to disability (n=12) during median (IQR) 12 (12) years symptom duration. Demographic and disease related characteristics of the patients with or without work disability were summarized in the table. In univariate analysis gender, smoking, education levels, the presence of peripheral arthritis, BASMI score and radiographically presence of syndesmophyte and hip involvement were found to be associated with poor work outcome. However poor work outcome were similar between r- and nr-axSpA patients. In regression analysis low education level (HR:3.4 [95%CI:1.4-8.6], P=0.007), peripheral arthritis (HR:2.7[95%CI:1.07-6.8], P=0.035), and ever smoking (HR:4.9 [95%CI:1.3-18.0], P=0.02) were independent predictors of work disability.

Conclusion: Our results suggest that there is still remarkable poor work outcome among axSpA patients and work disability might be similar in r- and nr-axSpA. Patients who are smoker, with low education levels, and peripheral arthritis seem to be at risk for premature work loss.

Table. Demographics and diseases related characteristics of study population

Variables	All population (n=219)	No work disability (n=172)	Work disability (n= 47)
Male, n (%)	161 (73.5)	122 (70.9)	39 (83)
Age, years*		41.5 (9.4)	43.1 (12.4)
Ever smoking, n (%)	155 (71.4)	115/171 (67.3)	40/46 (87)
Education duration ≤8 years, n (%)	82/212 (61.3)	53/165 (32.1)	29/47 (61.7)
Disease duration, years	6.7 (8.3)	5.5 (6.3)	10.7 (12.6)
BASDAI*	4.3 (2.4)	4 (2.3)	5.3 (2.6)
BASFI*	3.4 (2.8)	2.9 (2.5)	5.4 (3.0)
ASDAS-CRP*	2.8 (1.2)	2.7 (1.1)	3.3 (1.4)
BASMI*	2.3(2.0)	2 (1.8)	3.5 (2.4)
ASQOL*	9 (5.5)	8 (5.3)	12 (4.9)
Peripheral arthritis, n (%)	81/207 (39.1)	54/163 (33.1)	27/44 (61.4)
Hip arthritis, n (%)	39/205 (19)	26/163 (16)	13/42 (31)
Presence of syndesmophyte, n (%)	92/164 (56.1)	63/125 (50.4)	29/39 (74.4)

* Variables presented as mean (SD).

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AB1156 OVERVIEW OF INFLAMMATORY RHEUMATIC DISEASES AT THE EMERGENCY DEPARTMENT

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Background: Patients with rheumatological diseases can also apply to the emergency room due to acute attacks or complications. Especially in recent years, more patients, due to the increased use of immunosuppressant drugs in treatment, have applied to emergency services due to infection. On the other hand, data on applications to emergency services for rheumatological reasons are very few.

Objectives: In this study, applications to emergency departments for inflammatory rheumatic diseases were investigated.

Methods: 2715 patients from Atatürk Training and Research Hospital Rheumatology Clinic who were followed-up with the diagnosis of inflammatory rheumatic diseases between 2014 and 2018 were included in this study. The clinical and laboratory information of the patients were achieved from the hospital file records and the hospital data bank. The patients were classified according to the 5-stage triage system (T1: resuscitation, T2: critical, T3: urgent, T4: less urgent, T5: non-urgent).

Results: 21.3% (577) of 2715 patients applied to the emergency department. Among the emergency admissions, the first three diseases were; rheumatoid arthritis 19.7%, ankylosing spondylitis 19.2%, and familial Mediterranean fever 15.9% [Vasculitis 8.8%, Behcet's disease 7.6%, Gout 5.7%, Systemic lupus erythematosus 3.9%, Sjogren's Syndrome 3.6%, Scleroderma 3.2%, Still Disease 1.5%, Polymyalgia rheumatica 0.6%, others 9%]. 343 patients (59.5%) were discharged from the emergency department. 36.8% (212) of the patients were hospitalized in services and 3.6% (21) of them in intensive care. The first three reasons of the applications to the emergency department were: fever, malaise and fatigue in 1. 150 patients (25.9%), musculoskeletal system complaints in 2. 124 patients (21.4%) and abdominal pain in 3. 89 patients (15.4%), respectively. Vasculitis was the most common cause of hospitalization in the service in 38 patients (17.9%), whereas scleroderma was the most common cause of hospitalization in intensive care in 7 patients (33.3%) (table). 16 (76.1%) of the patients followed in intensive care unit were hospitalized with the diagnosis of respiratory system diseases. Death was observed in 10 (1.7%) of 577 patients. Five (50%) of the ex-patients had scleroderma (table). 8 (80%) of the deaths were related