Score (from 38.2 % to 47.8%), pulmonary function tests (from 30.9% to 43.5%), measures of dyspnoea (4.4% to 10.9%) and patient global disease (from 10.3% to 21.7%).

Conclusions: There was a wide range of domains reported in trials in systemic sclerosis. The uptake of domains and measure as per the core response set is low in SSc trials compared to other rheumatic diseases with only modest improvement in reporting of 6 out of 31 measures. Improvements in reporting of specific measures align with the recent development of a composite response index in systemic sclerosis (CRISS)2.

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FRI0656 PREDICTIVE VALIDITY OF PRESENTEEISM MEASURES WITH DUAL ANSWER KEYS IN INFLAMMATORY ARTHRITIS

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Background: Employment studies in arthritis have emphasized the importance of decreased productivity at work, or presenteeism. However, consensus is still lacking on how to best measure this construct. Instruments used include the Work Limitations Questionnaire (WLQ), which measures the amount of time people are limited, and the Workplace Activity Limitations Scale (WALS), which measures the degree of difficulty. We modified the response keys of the WLQ and WALS, creating a dual answer key assessing both degree of difficulty and amount of time with difficulty. Previous work by our group has shown that scores obtained from combining responses to the dual answer keys exhibit good internal consistency, criterion and construct validity.

Objectives: The objective of this study was to evaluate the ability of the combined scores to predict future work cessation and number of work days missed due to arthritis.

Methods: A longitudinal study used baseline and 6-month data from the RCT of an employment intervention, the "Making It Work" Program. Inclusion criteria were: inflammatory arthritis, age 19–59, working at baseline, and concerns about arthritis affecting work. 327 participants were included (RA:173, PsA:48, SLE:42, AS:64). Combined scores were obtained by i) multiplying, and ii) adding, the scores of difficulty and time answer keys at the item level. We assessed the predictive ability of the combined scores, and the original scores, of the WALS and WLQ to predict work cessation due to arthritis within 6 months using binary logistic regression models, or number of work days missed due to arthritis using zero-inflated Poisson models.

Results: WLQ and WALS original and combined scores were significant predictors of future work cessation and number of work days missed. The WLQ combined scores predicted work cessation better than the original score (AIC:117.6 & 118.2 for multiplicative and additive combinations, respectively vs. 125.4 for time) and work days missed (AIC:2179.8 & 2177.8 vs. 2188.7). WALS original score (ie. degree of difficulty) predicted work cessation better than combined scores (AIC:95.8 vs. 109.3 & 109.4). However, WALS combined scores predicted number of work days missed better (AIC:1696.9 & 1673.4 vs. 1795.2).

Conclusions: Combined scores from dual answer keys applied to the WLQ and WALS significantly predicted future work cessation and number of work days missed. Using combined scores, rather than original answer keys, improved the ability of the WLQ to predict both work cessation and work days missed, but only improved the ability of the WALS to predict work days missed.

Disclosure of Interest: None declared

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FRI0657 CONSTRUCT VALIDITY AND RESPONSIVENESS OF THREE STIFFNESS ITEMS IN RHEUMATOID ARTHRITIS: AN APPLICATION OF THE OMERACT FILTER 2.1

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Background: Stiffness is frequent and important to people with rheumatoid arthritis (RA), but measuring it is an unmet need. Qualitative research with people with RA has shown that stiffness duration, severity and interference have face and content validity. These items are being evaluated to develop a patient reported outcome measure (PROM) for stiffness.

Objectives: To evaluate individual stiffness item measurement properties using the OMERACT Filter 2.1.

Methods: Consecutive patients in a longitudinal RA cohort were enrolled. Participants completed 3 items assessing stiffness severity, interference, and duration. PROMs collected included patient global assessment (PGA), pain VAS, self-reported flare (Y/N), PROMIS measures, and patient global impression of change (PGIC). Physician assessments included 28 tender/swollen joint counts, and global (EGA). Disease activity indices were CDAI and DAS28-CRP. Stiffness construct validity was assessed using Spearman correlation coefficients. To assess discrimination in groups expected to change vs stable groups, we calculated standardized response means (SRMs) using multiple anchors.

Results: 196 patients with RA were included. **Construct validity:** all stiffness items correlated highly with pain; moderately with DAS-28 CRP and CDAI; and low with joint counts and EGA. Stiffness severity and interference correlated highly with PGA, pain interference and fatigue. Stiffness interference correlated highly with physical function. **Discrimination:** all stiffness items had moderate effect size for resolution of flare, and for 'much improved' by PGIC. Interference had moderate effect for improved CDAI category and for 'little improved' by PGIC. Stiffness duration had large effect for new RA flare, and 'much worse' by PGIC; severity and interference had moderate effect for RA flare; severity had moderate effect for worsened CDAI and for 'little worse' and 'much worse' by PGIC (TbI).

Table 1 Discrimination of stiffness items by anchor in RA longitudinal sample (n=181). SRM=mean change/pooled SD of change. SRM >0.8 large, 0.5–0.79 moderate, 0.2–0.5 small effect.

Stiffness Anchors	Duration SRM	Severity SRM	Interference SRM
Flare status (n=181)	0.67	0.68	0.54
Flare to No flare (improved) (n=26)	0.01	0.01	0.14
No flare to No flare (unchanged) (n=111)	0	0.19	0.27
Flare to Flare (unchanged) (n=14)	0.81	0.60	0.54
No flare to Flare (worse) (n=30)			
PGIC vs baseline (n=181)	0.52	0.61	0.79
Much improved (n=26)	0.43	0.46	0.60
Little improved (n=25)	0.08	0.08	0.11
No change (n=68)	0.41	0.67	0.42
Little worse (n=49)	1.05	0.59	0.39
Much worse (n=13)			
CDAI vs baseline (n=181)	0.25	0.21	0.61
Better CDAI category (n=45)	0.07	0.12	0.04
Unchanged CDAI category (n=87)	0.48	0.52	0.29
Worse CDAI category (n=49)			

Conclusions: In this cohort of RA patients there is emerging evidence for good construct validity for stiffness duration, severity and interference; moderate discrimination for improvement in RA disease state, and moderate to high discrimination for worsening RA. Additional items are being tested to assemble an instrument for measuring stiffness in RA.

Disclosure of Interest: None declared

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FRI0658 PROGNOSTIC MARKERS FOR RESPONSE ACCORDING TO THE NEW ACR/EULAR 2016 RESPONSE CRITERIA FOR IDIOPATHIC INFLAMMATORY MYOSITIS

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Background: Idiopathic inflammatory myopathies (IIM) is a heterogeneous group of chronic, inflammatory diseases with varying response to treatment. To