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Relationship Between Rheumatoid Arthritis Patients' Health Outcomes and Patient Satisfaction Scores: a Retrospective Cohort Study

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- Patient-centered care has long been at the forefront of many physician's minds
- Satisfaction metrics provide a framework to measure if patients feel their care is patient-centered and is becoming increasingly used in physician compensation models
- It is not immediately clear that patient satisfaction relates positively to a patient's treatment's effectiveness¹ and concerns have been expressed over tying compensation to these metrics²
- Clinical disease activity index (CDAI) for rheumatoid arthritis (RA) patients provide an objective measure of disease
- Comparison of measurements through National Research Corporation (NRC) Health and CDAI scores serve to determine the suitability of using patient satisfaction as a metric for physician compensation

Problem Statement

- Do higher patient satisfaction scores in rheumatoid arthritis patients correlate with lower disease activity, CDAI scores.

- Initial pilot study was conducted comparing CDAI scores and patient satisfaction values. Initial data showed no significant difference in CDAI scores across provider rating and office recommendation
- Selected patients for this study were those treated by Lehigh Valley Physician Group (LVPG) Rheumatology practices from July 2019 until February 2020 with a diagnosis of RA and a recorded CDAI score
- CDAI scores were further broken down into groupings of remission (0-2.8), low activity (2.9-10), moderate activity (10.1-22), and high activity (22.1-76)
- CDAI scores were then compared to likelihood to recommend practice and overall provider rating, reported by patient surveys gathered by NRC Health and on a scale of 0 to 10
- We used the Kruskal-Wallis test to investigate the association between CDAI scores and qualitative CDAI categories against patients' likelihood of recommending the practice and the provider rating metrics measured by NRC Health

Disease Activity		Patient Satisfaction		
CDAI Qualitative		Age at Discharge	Likelihood to Rec. Practice	Overall Provider Score
Remission (n=81)				
	Mean	68	9.72	9.72
	Std. Deviation	11.652	1.175	1.087
	Median	71	10	10
	Min.	25	1	1
	Max	93	10	10
Low Activity (n=96)				
	Mean	65.08	9.51	9.69
	Std. Deviation	10.931	1.686	0.933
	Median	65	10	10
	Min.	38	0	3
	Max	93	10	10
Moderate Activity (n=53)				
	Mean	65.64	9.28	9.30
	Std. Deviation	11.404	1.549	1.381
	Median	66	10	10
	Min.	30	2	2
	Max	82	10	10
High Activity (n=12)				
	Mean	52.08	9.67	9.58
	Std. Deviation	16.279	0.492	0.669
	Median	53.5	10	10
	Min.	21	9	8
	Max	82	10	10

Table 1. Descriptive Means of CDAI compared to Patient Satisfaction

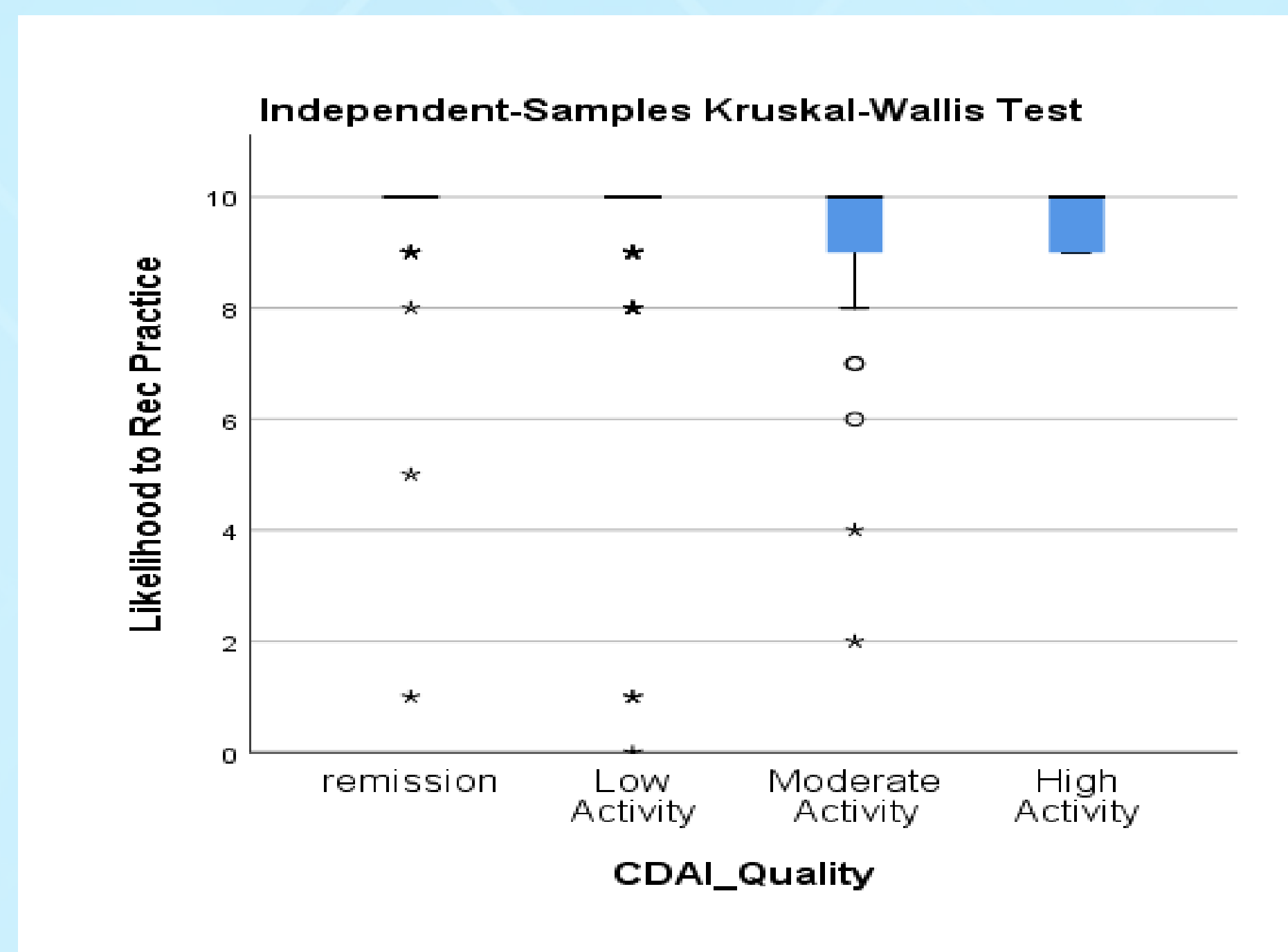


Figure 1. Likelihood to Recommend Practice vs. Qualitative CDAI Grouping

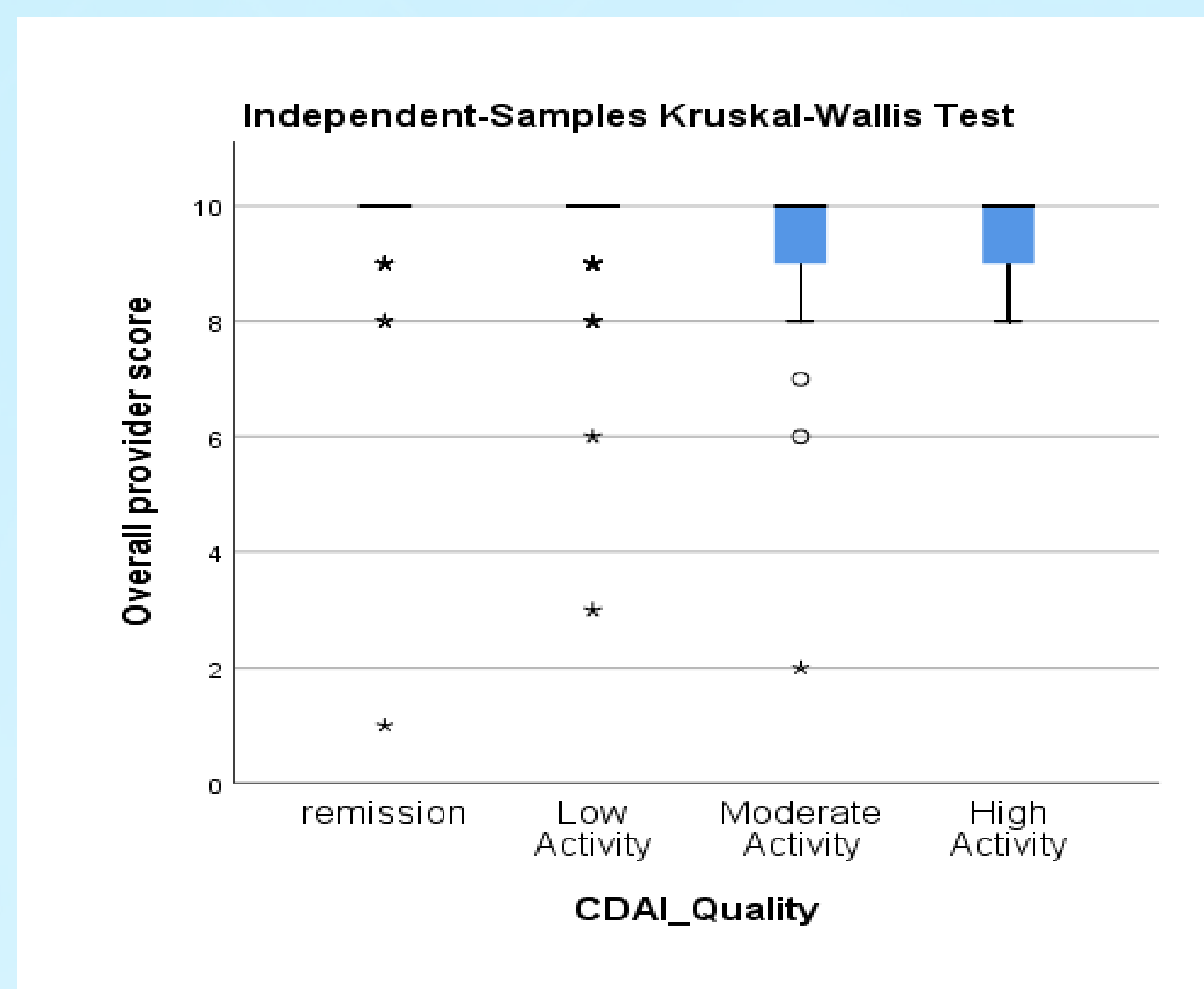


Figure 2. Overall Provider Score vs. Qualitative CDAI Grouping

- No correlation was found when comparing individual CDAI scores to a patient's likelihood to recommend a practice or their overall rating of the provider
- There is a positive relationship between CDAI qualitative category and the patient's likelihood to recommend the practice as well as the patients overall rating of the individual provider
- Patients in remission on average had a higher provider rating than those in higher CDAI qualitative categories
- Patient satisfaction metrics exist to measure the patient experience and values-based patient care aims to ensure that the patient is involved in their care decision making, which in turn should lead to more satisfied patients
- Extrapolating, those who were involved in their care through a values-based approach may have had better outcomes and were more likely to recommend the practice and rate their individual provider higher

- Our study demonstrated that patients with better health outcomes via lower RA disease activity categorization are more satisfied with their provider's care and the hospital services
- This information can be used in the future to help justify patient satisfaction driven compensation models to those who are concerned about the impacts on patient outcomes

1. Pincus T, Summey JA, Soraci SA Jr, Wallston KA, Hummon NP. Assessment of patient satisfaction in activities of daily living using a modified Stanford Health Assessment Questionnaire. *Arthritis Rheum.* 1983;26(11):1346-1353. doi:10.1002/art.1780261107
2. Sweeney, James F. "Physicians Dissatisfied with Patient Satisfaction Surveys: Patient Feedback Is Important, but Becomes Problematic When Linked to Pay, Doctors Say." *Medical Economics*, no. 21 (2016): 43.

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