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INTRODUCTION AND BACKGROUND

- Rheumatoid Arthritis (RA) is the most common type of autoimmune inflammatory arthritis in adults,¹ with the prevalence in the United States of 0.5% and rising²
- There are multiple validated Disease activity metrics recommended for use in RA by the American College of Rheumatology (ACR) and treatment guidelines for RA. These disease activity metrics help provide objective measures for tracking treat-to-target status in patients with RA.
- University Hospitals Health System (UHHS)**
 - UHHS Division of Rheumatology** is a large teaching service comprised of rheumatologists and rheumatology fellows. This study took place within one rheumatology clinic comprised of three attending rheumatologist physicians, six rheumatology fellows, and two rheumatology clinical pharmacy specialists
 - Current lack of documentation, work flow process of objective metrics in a uniform, consistent fashion
- University Hospitals Specialty Pharmacy (UHSP)** is part of an integrated health-system delivery network model within UHHS
 - UHSP Rheumatology Patient Management Program:
 - Procurement of specialty medications; support with prior authorizations, medical letters of necessity and appeals (first, second and external appeals), peer to peer support; prescription refills reminders and adherence monitoring; patient assistance program (PAP) support (foundation, grant, drug manufacture PAP); patient education; quarterly to semi-annual clinical pharmacist monitoring for efficacy, tolerance, adherence, side effects, patient satisfaction and quality of life
 - UHSP Team Structure:
 - Clinic Team: clinical pharmacist specialists embedded in rheumatology clinics
 - Office Team: pharmacists; patient support advocates; pharmacy technicians

OBJECTIVES

- The purpose of this study was to gain insight into the current level of disease activity in patients with Rheumatoid Arthritis (RA) seen in a University Hospitals Rheumatology Clinic.
- Primary Objective:** Describe the level of patients' RA disease activity based on their objective disease activity score
 - Routine Assessment of Patient Index Data (RAPID 3) scoring was implemented within the clinic for capturing an objective disease activity score.
- Secondary Objectives:**
 - Medication adherence, as measured by proportion of days covered (PDC) for patients filling with University Hospitals Specialty Pharmacy (UHSP)
 - Determination if a correlation existed between adherence calculation and level of disease activity for patients filling with UHSP
 - Compare the RAPID3 score of patients who filled their medication with UHSP compared to with RAPID 3 scores of patients who filled elsewhere.

METHODS

- Retrospective chart review of adult patients (≥18 years old) with RA receiving disease modifying anti-rheumatic drug (DMARD) therapy
- Study approved by University Hospitals' Investigational Review Board (IRB)
- RAPID 3 score documented between March 1, 2019 – February 29, 2020

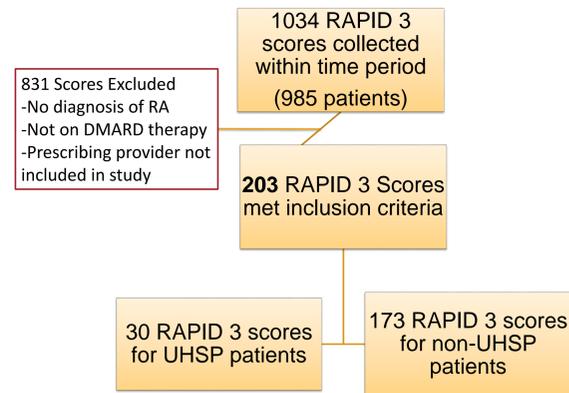
INCLUSION

- Adult patients (≥18 years old)
- Documented ICD-10 code of rheumatoid arthritis
- RAPID 3 score in electronic medical record
- Evaluated by 1 of the 3 rheumatology attending physicians or 6 fellows participating in this study
- Patient has active DMARD prescription at time of RAPID 3 score

EXCLUSION

- No documented RAPID 3 score within time frame
- Not on active DMARD therapy
- Not evaluated by one of the providers of this study

RESULTS

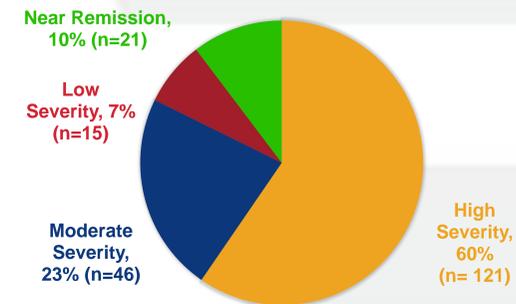


DEMOGRAPHIC CHARACTERISTICS	UHSP Patients (n=30)	NON-UHSP Patients (n=156)	TOTAL Patients (n=186)
Average Age (range, yrs)	60 (25-81)	63 (20-90)	63 (20-90)
Sex (no. of patients)			
-Female (#, %)	27, (90%)	128 (82)	155 (83%)
-Male (#, %)	3 (10%)	28 (18%)	31 (17%)
RA DMARD Therapy			
- Conventional	0 (0%)	108 (69%)	108 (58%)
- Biologic	9 (30%)	26 (17%)	35 (19%)
- Combination	21 (70%)	22 (14%)	43 (23%)

PRIMARY OBJECTIVE

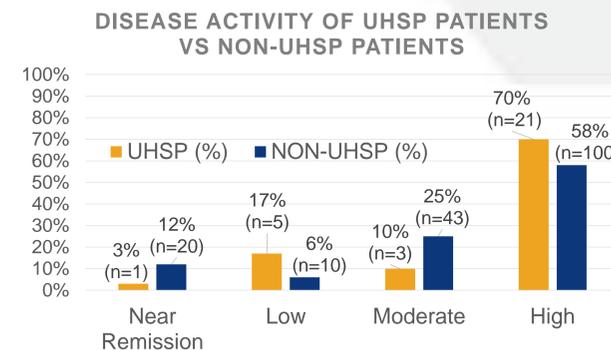
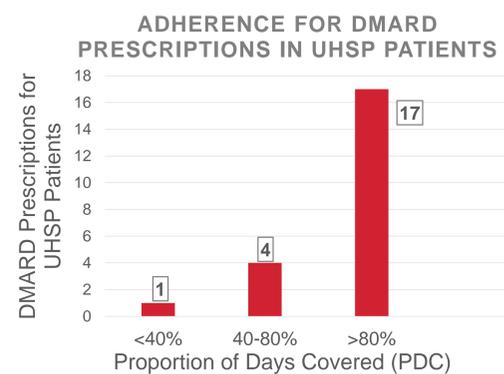
- Describe the level of patient's RA disease activity based on their RAPID 3 scores

Disease Activity Results	UHSP (n=30)	NON-UHSP (n=173)	TOTAL (n=203)
Near Remission	1 (3%)	20 (12%)	21 (10%)
Low	5 (17%)	10 (6%)	15 (7%)
Moderate	3 (10%)	43 (25%)	46 (23%)
High	21 (70%)	100 (58%)	121 (60%)



SECONDARY OBJECTIVES

- Medication adherence measured by proportion of days covered (PDC) only able to calculate scores in 22/30 pts
- Compare RAPID 3 scores between UHSP patients and patients receiving their medication from outside SPs



- Examine if there is a correlation between medication adherence (PDC) and severity of disease activity (RAPID 3):
 - Good adherence defined as PDC>80%
 - Chi square value calculated was 0.01, indicating lack of a strong correlation between disease activity and adherence in this study
 - $y = -0.0032x + 0.9418$ $R^2 = 0.0123 \rightarrow R\text{-squared (R2)}$

DISCUSSION AND CONCLUSION

- The majority (60%) of RAPID 3 scores fell in the high disease activity category
- Only 17% of RAPID 3 scores achieved the target of low disease activity or remission
- Low over all number of patients filling with UHSP make it difficult to make any firm conclusions from the secondary objectives
- Low overall numbers of RAPID 3 captures for patients with RA within this clinic. Improvements in workflow are needed in order to capture and document objective disease scores more consistently

STUDY STRENGTHS;

- Pharmacy/Pharmacist access to patient medical record
- Direct access to patients via clinic visits and phone follow-up for pharmacists to complete RAPID 3 with patients
- Dispensing history and PDC data available for UHSP patients
- No provider involvement required for pharmacists to enter RAPID 3 in EMR
- RAPID 3 is a disease activity measure supported by the ACR

STUDY WEAKNESSES:

- Retrospective chart review
- Single center study
- Not inclusive of all UH Rheumatology
- Small number overall of RAPID 3 score documentation
- Clinic location change mid study hindered RAPID 3 collection
- Small numbers filled with UHSP
- PDC measures the possession of medication rather than administration of DMARD to the patient

FUTURE DIRECTIONS:

- Share results with Rheumatology Providers included in the study
- Create a sustainable workflow to ensure more consistent capture of RAPID 3
 - Adjust EMR note template to trigger for necessary documentation
 - Within Rheumatology clinics
 - Within Specialty Pharmacy (initial assessments and reassessments)
- Repeat the primary outcome/study after the result capture work flow resolved
 - More accurate picture of current clinical disease management
 - Capture disease activity scores per patient, show change over time
- Clinical Pharmacist Workflow Targets
 - Patients falling into "High-Severity" category will scheduled for follow-up with a clinical pharmacist specialist for comprehensive overview and treatment plan
 - Adherence Initiative: UHSP Pharmacists can target patients with a PDC <80% to provide adherence counseling
- Start similar quality improvement and research projects for other rheumatologic disease states (Psoriatic Arthritis, Ankylosing Spondylitis)

DISCLOSURE AND REFERENCES

- The researchers report no potential or actual conflicts of interest relevant to this poster or research.
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