Adherence issues in Rheumatoid Arthritis Treatment: How can Acceptance Measurement Help Understanding Patients' Concerns and Working on Solutions?

Wiederkehr Sandra[1], PhD, de Bock Elodie[1], PhD, Chekroun Michael[2], Arnould Benoit[1], PhD
[1]Patient-Centered Outcomes, Mapi, Lyon, France,
[2]Carenity, Paris, France

BACKGROUND

- Management of most chronic conditions requires the patients to take long-term treatments.
- Lack of adherence and persistence are major barriers to treatment efficacy.
- Patients' behaviour and attitude toward their treatment are hypothesised to result from a complex evaluation of the benefits and risks of their treatment by the patients themselves.
- Measuring patients' acceptance of their medication can help better understand and predict patients' behaviour towards treatment.

OBJECTIVES

This study aimed at evaluating the levels of acceptance and adherence of patients with rheumatoid arthritis (RA) in real life using a European patient online community.

METHODS

Study design
- An observational, cross-sectional study conducted through the French, English, German, Spanish and Italian Carenity platforms between Oct 2015 and Feb 2016[1].
- The Carenity platform is a global online patient community in which both patients and carers, concerned by a chronic disease, can share their experience, find basic tools for health follow-up and contribute to medical research by participating in online RWE studies.
- Patients included in this analysis were adults suffering from RA and currently receiving treatment.

Assessments
All patients connecting to the Carenity platform were invited to complete an online questionnaire including:
- Questions on demographics, chronic disease and medication.
- The ACCEptance by the Patients of their Treatment (ACCEPT®) questionnaire[2,3]:
  o 25 items covering six dimensions corresponding to treatment-attributes.
  o Scores range from 0 to 100 with higher score indicating greater acceptance.
- The Morisky Medication Adherence Scale (MMAS-8®)[4]:
  o 8-item scale with a score ranging from 0 to 8 with the following interpretation: 0 to <6 (low adherence), 6 to <8 (moderate adherence) and 8 (high adherence).

Statistical analysis
- Descriptive statistics were used to describe the patient population and the ACCEPT® and MMAS-8® scores.
- The distribution of adherence and acceptance scores across RA treatments was analysed.
- Pearson correlations between the Acceptance General score, MMAS-8® adherence score and ACCEPT® treatment-attributes scores were calculated.

RESULTS

Population (Figure 1 and Table 1)
- 215 RA patients were included in the analysis; 179 took immunosuppressants and 36 took other RA treatments.
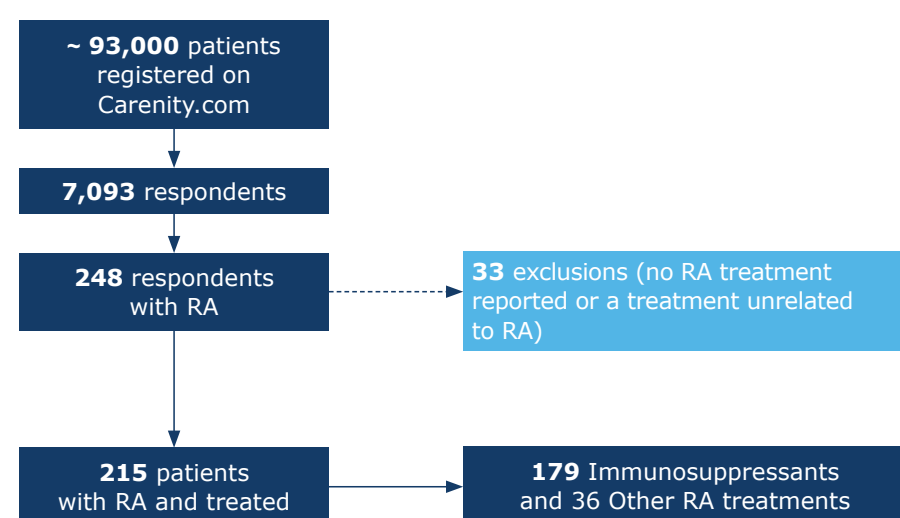

Figure 1: Patient disposition

Table 1: Description of the population (N=215)

	Immunosuppressants N=179	Other RA treatments N=36	Total N=215
Gender, Female – n (%)	157 (87.7%)	29 (80.6%)	186 (86.5%)
Age, years – mean (SD)	52.5 (11.9)	56.7 (12.3)	53.2 (12.0)
≥ 10 years since diagnosis - n (%)	58 (32.4%)	15 (41.7%)	73 (34.0%)
Employed, professional status - n (%)	84 (46.9%)	17 (47.2%)	101 (47.0%)

Level of adherence (Figure 2)
- Mean MMAS adherence score was between 6 and 7, indicating that these patients were moderately adherent to their treatment.
- There was no significant difference in adherence score between treatment classes.
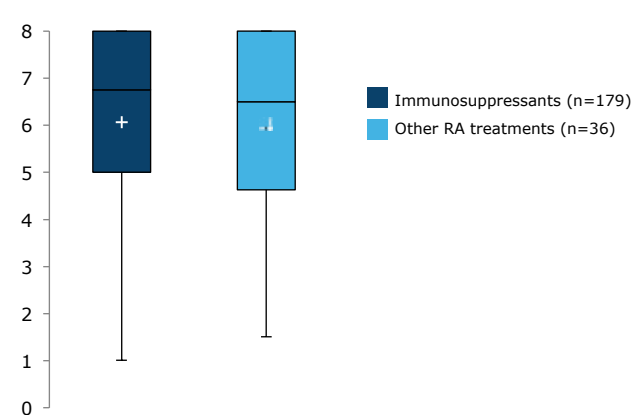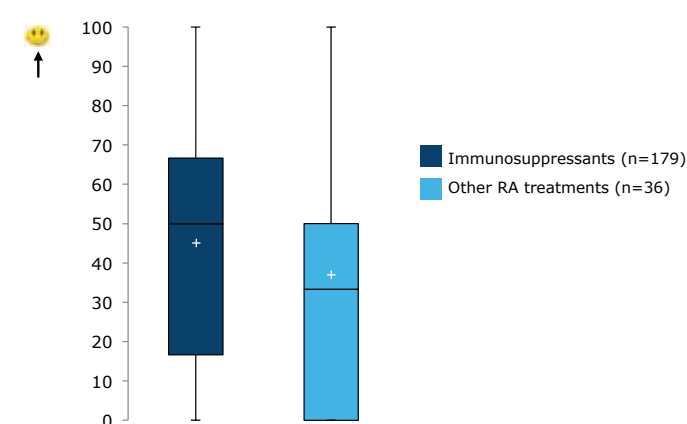

Box = interquartile (Q3-Q1); + = mean; middle bar = median; upper and lower bars = observed max – min values.

Figure 2: MMAS Adherence score for RA patients per treatment class (N=215)

ACCEPT – General Acceptance-Key findings (Figure 3)
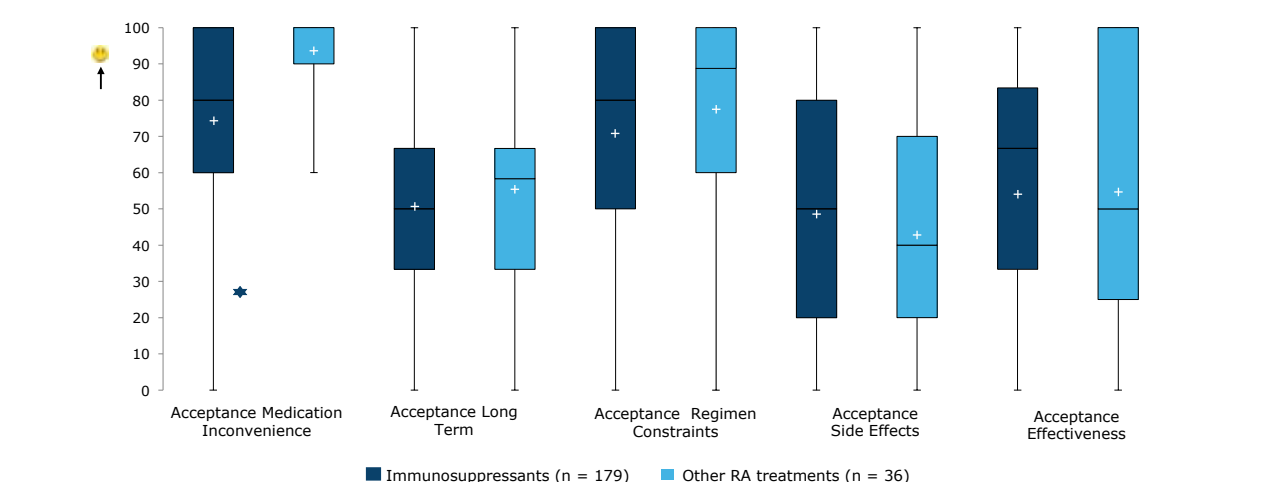- General Acceptance was low (less than 50 or around 50 in mean), whatever the treatment received.

Box = interquartile (Q3-Q1); + = mean; middle bar = median; upper and lower bars = observed max – min values.

Figure 3: ACCEPT General score per main treatment (N=215)

ACCEPT – Treatment-attributes-Key findings (Figure 4)
- The domain where patients reported highest mean score was Acceptance/Medication Inconvenience. Patients taking immunosuppressant having a statistically significant lower score (74.4) than patients taking other RA treatments (93.6).
- The domain where patients reported lowest mean score was Acceptance/Side effects.

Box = interquartile (Q3-Q1); + = mean; middle bar = median; upper and lower bars = observed max – min values.
Star indicates significance (p<0.05).

Figure 4: ACCEPT treatment-attributes scores per treatment class (N=215)

Acceptance in more detail (Figure 5)
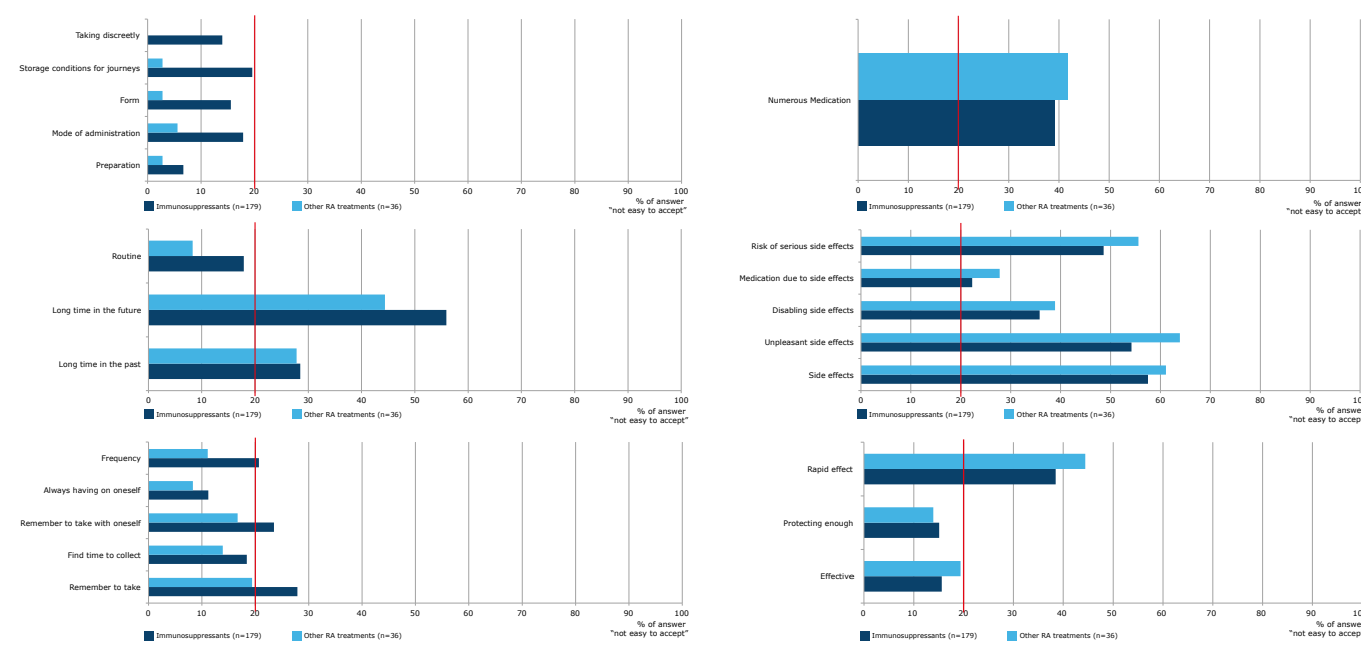- Exploring ACCEPT at the item level:

Figure 5: ACCEPT item scores per treatment class (N=215)

Link between general acceptance, adherence and ACCEPT treatment-attributes (Table 2)
- General Acceptance was primarily correlated with Acceptance/Effectiveness (r=0.56), and somewhat with the practical attributes of treatment (r=0.16 to 0.30).
- Adherence was primarily correlated with the practical attributes (r=0.22 to 0.48).
- Correlation between General Acceptance and Adherence (r=0.22) was significant, but quite small.

Table 2: Main correlations (N=215)

	Acceptance/Medication Inconvenience	Acceptance/ Long Term	Acceptance/Regimen Constraints	Acceptance/Side Effects	Acceptance/ Effectiveness	Acceptance/ General Score	Adherence Score
Acceptance/General Score	R = 0.16 p=0.02	R = 0.25 p<0.0001	R = 0.25 p<0.0001	R = 0.30 p<0.0001	R = 0.56 p<0.0001	1	R = 0.22 p=0.001
Adherence Score	R = 0.23 p<0.0001	R = 0.44 p<0.0001	R = 0.48 p<0.0001	R = 0.22 p=0.001	R = 0.10 p=0.15	R = 0.22 p=0.001	1

Notes: Correlations were based on a sample that varied between 214 and 215 patients. The dimension Acceptance/Numerous Medication is not represented since an ordinal variable.

	Correlation between 0 and 0.2
	Correlation between 0.2 and 0.4
	Correlation between 0.4 and 0.6

CONCLUSIONS

- General Acceptance was low and far from ideal whatever the treatment (immunosuppressants or other RA treatments).
- Adherence scores were moderate whatever the treatment (immunosuppressants or other RA treatments).
- Patients treated with other RA treatment had better scores than immunosuppressant-treated patients in Acceptance/Medication inconvenience.
- Acceptance and Adherence are two related but different constructs.
  o In RA, general acceptance was driven by efficacy, while current adherence was driven by regimen constraints and long term treatment acceptance.

REFERENCES
1. de Bock E et al. ISPOR 19th Annual European Congress. 2016
2. Marant C et al. Patient. 2012;5:239-249. / 2. Arnould B et al. Patient. 2017;10(1):81-92
3. Arnould B et al. Patient. 2017;10(1):81-92
4. Morisky DE et al. J Clin Hypertens. 2008;10(5):348-54

For more information, please contact
Elodie de Bock, edebock@mapigroup.com,
www.mapigroup.com