Adherence issues in Diabetes Treatment: How can Acceptance Measurement Help Understanding Patients’ Concerns and Working on Solutions?

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BACKGROUND
- Management of chronic conditions requires the patients to take long-term treatments.
- Lack of adherence and persistence are major barriers to treatment efficacy.

OBJECTIVES
This study aimed at evaluating the levels of acceptance and adherence of type 1 and type 2 diabetes patients (T1D and T2D) in real life using a patient online European community.

METHODS
- Study design
  - An observational, cross-sectional study was conducted through the French, English, German, Spanish and Italian Carenity platforms between October 2015 and February 2016.
  - 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 T1D or T2D 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:
  - 25 items covering six dimensions corresponding to treatment-attributes.
  - Scores range from 0 to 100 with high score indicating greater adherence.
- The Morrissey Medication Adherence Scale (MMAS-8®):
  - 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 T1D and T2D 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)
- Among the 1,213 diabetic patients included in the analysis, 267 had T1D and 946 had T2D.
- 116 patients excluded:
  - 49 had no chronic disease treatment reported
  - 67 had other chronic disease treatment than for diabetes

Figure 1: Patient disposition

Table 1: Description of the population (N=1,213)

Level of adherence: Per diabetes type and treatment class (Figure 2)
- Similar adherence level regardless of diabetes type or class of treatment was observed.

Figure 2: MMAS-8 adherence scores in diabetic patients (N=1,213)

Level of acceptance: Per diabetes type (Figure 3)
- T1D patients showed better general acceptance than T2D.
- T2D patients showed better scores than T1D patients indicating better acceptance in Medication Inconvenience, Regimen Constraints and Long-term treatment-attributes.
- T2D and T1D were comparable in terms of Acceptance of their treatment Side Effects.

The domain where patients reported lowest scores was:
- Acceptance/Long-term treatment for T1D and T2D

CONCLUSIONS
- Acceptance and adherence levels were relatively high in diabetic patients but far from ideal.
- General Acceptance level was higher in patients receiving insulin and analogues than in patients receiving blood glucose lowering drugs.
  - But no significant difference in Adherence levels.
- Insulin and analogues treatments were better than blood glucose lowering drugs in Acceptance/Effectiveness.
- Blood glucose lowering drugs were better than insulin and analogues in Acceptance/other attributes (Medication inconvenience, Long-term, Regimen constraints, Side Effects).
- Acceptance and Adherence are two related but different constructs.
- Acceptance levels showed more contrasts than Adherence levels.
- In diabetes, general acceptance was driven by efficacy, while current adherence was driven by regimen constraints.

REFERENCES
1. de Bock E et al. ISPOR 19th Annual European Congress. 2016

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