

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



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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 their complex evaluation of the risk-benefit ratio of their treatment.
- Measuring patients' acceptance of their medication can help better understand and predict patients' behaviour towards treatment.

Objectives

This study aimed at evaluating the level of acceptance to medication in patients with COPD in real life; to identify issues and to define priorities for action.

Methods

Study design

- An observational, cross-sectional study was conducted through the French, English, German, Spanish and Italian Carenity platforms between Oct 2015 and Feb 2016.
- CARENITY is an international online patient community devoted to people with chronic diseases. It enables patients and caregivers to share their experience as well as information, follow the course of their disease and contribute to medical research by generating real-world patient insights through online surveys.
- Patients included in this analysis were adults with COPD and currently receiving treatment.

Assessments

All patients connecting to the Carenity platforms 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^{1,2}:
 - 25 items covering six dimensions corresponding to one general acceptance dimension and five multi-item treatment-attributes dimensions.
 - Scores range from 0 to 100 with higher score indicating greater acceptance.

Statistical analysis

- Descriptive statistics were used to describe the patient population and the ACCEPT[®] score.
- The distribution of acceptance score across COPD treatments was analysed.
- Pearson correlations between the Acceptance/General score and ACCEPT treatment-attributes scores were calculated.

Results

Population (Figure 1 and Table 1)

- Among the 117 patients with COPD included in the analysis, 61 took adrenergics/inhalants, 41 other drugs for obstructive airway disease/inhalants and 15 took other COPD treatments.

Figure 1 : Patient disposition

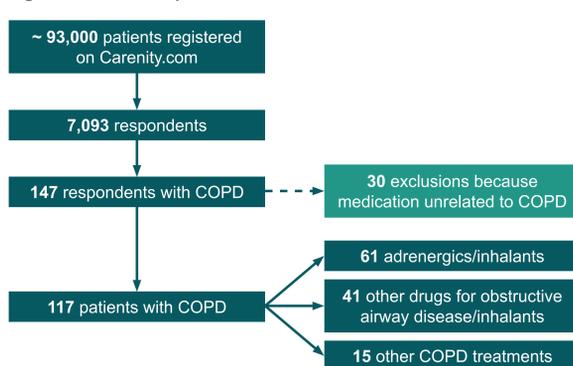


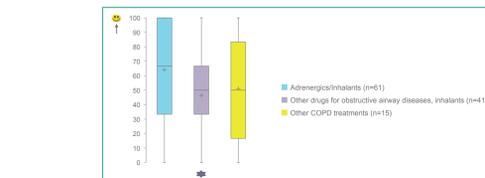
Table 1: Description of the population (N=117)

	Adrenergics/inhalants (N=61)	Other drugs for obstructive airway disease/inhalants (N=41)	Other COPD treatments (N=15)	Total (N=117)
Gender, Male - n (%)	21 (34%)	22 (54%)	8 (53%)	51 (44%)
Age, years - mean (sd)	62.6 (8.8)	64.4 (7.4)	60.9 (8.3)	63.0 (8.3)
< 5 years since diagnosis - n (%)	26 (43%)	17 (41%)	7 (47%)	50 (42.7%)
Employed, professional status - n (%)	15 (25%)	10 (24%)	2 (13%)	27 (23%)

ACCEPT – General Acceptance Key Findings (Figure 2)

- General Acceptance was low (mean less than 50) for patients taking other drugs for obstructive airway diseases, inhalants and for those taking other COPD treatments.
- Patients taking adrenergics/inhalants had a statistically significant better score (64.2) in Acceptance/General than patients taking other drugs for obstructive airway diseases, inhalants (46.3) and patients taking other COPD treatments (51.1).

Figure 2: ACCEPT General score per treatment class (N=117)

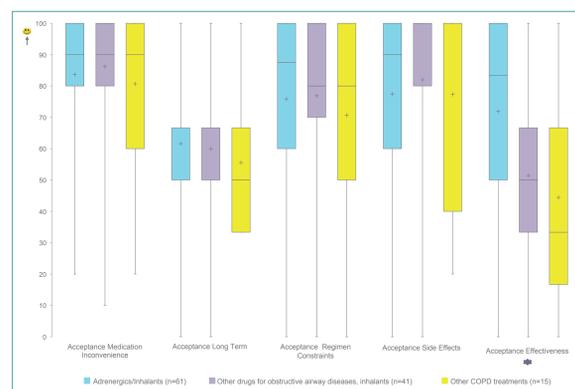


Box = Interquartile (Q3-Q1); + = mean; middle bar = median; upper and lower bars = observed min and max values. Purple stars indicate significance (p<0.05).

ACCEPT – Treatment-Attributes Key Findings (Figure 3)

- The domain where patients reported the highest mean score was Acceptance/Medication Inconvenience whatever the treatment group (83.7 for adrenergics/inhalants, 86.2 for other drugs for obstructive airway diseases, inhalants and 80.7 for other COPD treatments).
- The domain where patients reported lowest mean score were Acceptance/Long Term for patients taking adrenergics/inhalants (61.6) and Acceptance/Effectiveness for the other two treatment groups (51.4 for other drugs for obstructive airway diseases and 44.4 for other COPD treatments).
- Patients taking adrenergics/inhalants had a statistically significant better score (71.9) in Acceptance/Effectiveness than patients taking other drugs for obstructive airway diseases, inhalants (51.4) and patients taking other COPD treatments (44.4).

Figure 3: ACCEPT treatment-attributes per treatment class (N=117)



Box = Interquartile (Q3-Q1); + = mean; middle bar = median; upper and lower bars = observed min and max values. Purple stars indicate significance (p<0.05).

Acceptance in more detail (Figure 4)

- Exploring ACCEPT at the item level:

Figure 4: Percentage of answer (not easy to accept) for each item of ACCEPT questionnaire per treatment class (N=117)



Link between general acceptance and ACCEPT treatment-attributes (Table 2)

- General Acceptance was primarily correlated with Acceptance/Effectiveness (r=0.64), and somewhat with the practical attributes of treatment (r=0.14 to 0.28).

Table 2: Key Pearson correlation coefficients (N=117)

	Acceptance/Medication Inconvenience	Acceptance/Long term	Acceptance/Regimen Constraints	Acceptance/Side Effects	Acceptance/Effectiveness
Acceptance/General Score	R = 0.14 P=0.140	R = 0.26 P=0.005	R = 0.28 P=0.002	R = 0.23 P=0.013	R = 0.64 P<0.001

R=Pearson correlation coefficient. Legend: Correlation between 0 and 0.2 (blue), Correlation between 0.2 and 0.4 (orange), Correlation between 0.4 and 0.7 (red).

Conclusions

- Treatment acceptance is not satisfactory in COPD.
- Patients treated with adrenergics/inhalants had better scores than patients treated with the other drugs for obstructive airway diseases, inhalants and other COPD treatments in Acceptance/General and Acceptance/Effectiveness.
- Long-term duration seems to be a major issue for patients with COPD, whatever the treatment received.
- In COPD, major unmet needs are effectiveness, side effects (unpleasant, disabling) whatever the treatment received and regimen constraints in patients treated with other COPD treatments.
- Limitations in effectiveness was an issue in COPD patients not treated with Adrenergics.
- In COPD, general acceptance was primarily driven by Acceptance of limitations in Efficiency; secondarily by Acceptance of Constraints, Acceptance of Long-term and Acceptance of Side Effects.

References

1. Marant C et al. Patient. 2012;5:239-249.
2. Arnould B et al. Patient. 2017;10(1):81-92.

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