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Patient preferences with rheumatological or dermatological diseases regarding electronic injection devices for the administration of etanercept in Colombia

Rubio A[1], Ruiz F[1], Sanchez DF[1], Castaño Gamboa N[1], Reyes Sanchez JM[1]

[1]Pfizer S.A.S, Bogotá-Colombia

BACKGROUND

- A wide variety of disease-modifying antirheumatic drugs are available as a mainstay in therapy for chronic inflammatory diseases. These therapies have proven their effectiveness in relieving disease severity.[1-2] However, proper adherence and persistence are crucial to achieve the reduction of disease activity.[3]
- Several factors may influence medication adherence and persistence patterns, one of the main ones being the patient and treatment factors.[3-4]
- To reduce the impact of treatment administration on patients' lives, and improve patient experience during the administration, self-injection devices have been developed, such as electronic injection devices (e-Devices).[5]
- Patient perspective studies can provide information on the impact of changing device features on preferences and indicate whether these features will help improve the treatment experience.[6]

OBJECTIVES

The primary objective was to determine the preferences for the technical functionalities of the e-Devices and the optional app in patients with rheumatological or dermatological diseases treated with etanercept. Secondary objectives included: a) To describe the demographic and social characteristics of the study patient cohort and b) To describe the experience and digital inclinations of the participating patients.

METHODS

A cross-sectional study was conducted in a cohort of patients with rheumatoid arthritis (RA), axial spondyloarthritis (axSpA), psoriatic arthritis (PsA), psoriasis (PsO), and prior experience with self-injection devices on etanercept treatment according to routine clinical practice. The survey was conducted from April to May 2022. The study protocol was approved by a local ethics committee.

- **Patient selection:**

Patients were recruited from Pfizer Patient Program for etanercept in Colombia. All participants had previous experience in the treatment administration with pre-filled syringes (PFS) or/and prefilled pens (PFP); during the survey, the PFP was the device in current use. In Colombia, there was only one PFP approved for Pfizer´s etanercept at the time of the survey.

Potential candidates were selected by randomized sampling from the database of all patients under follow-up in the patient program. Inclusion criteria were a confirmed diagnosis with previous or current etanercept treatment and age ≥18 years.

- **Study procedure:**

During a routine telephone interview from the patient program, a trained interviewer obtained verbal informed consent and conducted a telephone survey of 21 questions.

- **Data collection:**
  - The patient characteristics were collected from the database of the patient program.
  - The survey instrument designed for the study included four categories of questions: General characteristics and health information, injection and digital experiences, and preferences of main technical functionalities present in the e-Devices and their app. A rating scale of 1 to 7 (categorized as not useful (1-2), neutral (3-5), and useful (6-7)) was performed to measure patient preferences.

Table 1. Sociodemographic and clinical characteristics of the patients

Characteristic	RA (n=358)	axSpA (n=79)	PsO (n=33)	PsA (n=29)	Total (N=499)
Age (years), n (%)[a]					
22-34	3 (0.8)	2 (2.5)	2 (6.1)	0 (0)	7 (1.4)
35-49	71 (19.8)	24 (30.4)	8 (24.2)	6 (20.7)	109 (21.8)
50-64	260 (72.6)	51 (64.6)	22 (66.7)	22 (75.9)	355 (71)
65-72	22 (6.1)	2 (2.5)	1 (3)	1 (3.4)	26 (5.2)
Sex, n (%)					
Female	308 (86)	30 (38)	17 (51.5)	13 (44.8)	368 (73.7)
Male	50 (14)	49 (62)	16 (48.5)	16 (55.2)	131 (26.3)
Type of health insurance regime, n(%)[b]					
Contributive	249 (69.5)	66 (83.5)	25 (75.8)	24 (82.8)	364 (72.9)
Subsidized	87 (24.3)	6 (7.6)	4(12.1)	4 (13.8)	101 (20.2)
Special	22 (6.2)	7 (8.9)	4 (12.1)	1 (3.4)	34 (6.8)
Time of experience with self-injection devices (months), median (IQR)[c]	41.5 (22-80)	57 (29- 109)	85 (29- 110)	82 (38- 107)	48 (24- 93)
Years of diagnosed, n (%)					
1-5	38 (10.6)	20 (25.3)	5 (15.1)	2 (7.0)	65 (13)
6-10	80 (22.4)	25 (31.7)	4 (12.1)	7 (24.1)	116 (23.2)
≥ 11	240 (67)	34 (43)	24 (72.8)	20 (68.9)	318 (63.8)

a Missing data: 2 patientswith RA.

b Type of affiliation to the General System of Social Security in Health (SGSSS in Spanish abbreviation) in Colombia: Contributive regime (it provides mandatory coverage to workers in the formal sector), and Subsidized regime (it covers the low-income population that does not have the capacity to contribute to health system). The "Special" or "exception" health regimen includes members of the armed forces and police, the teaching profession, employees at the State oil firm, and public universities that availed themselves of Law 647 of 2001.

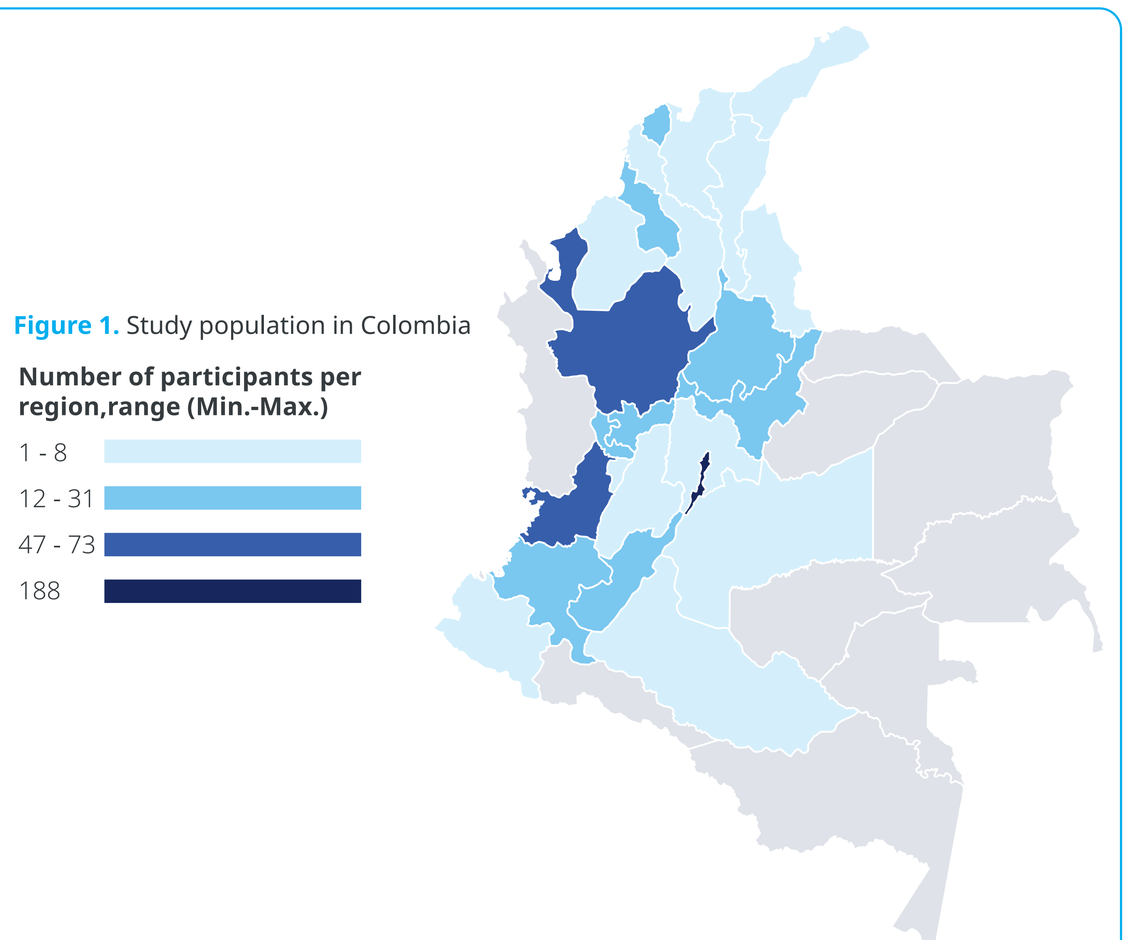
c Calculated based on the date the patientwas enrolled in the patient program.

Abbreviations: RA, rheumatoid arthritis; **axSpA,** axial spondyloarthritis; **PsO,** psoriasis; **PsA,** psoriatic arthritis; **IQR,** interquartile range

RESULTS

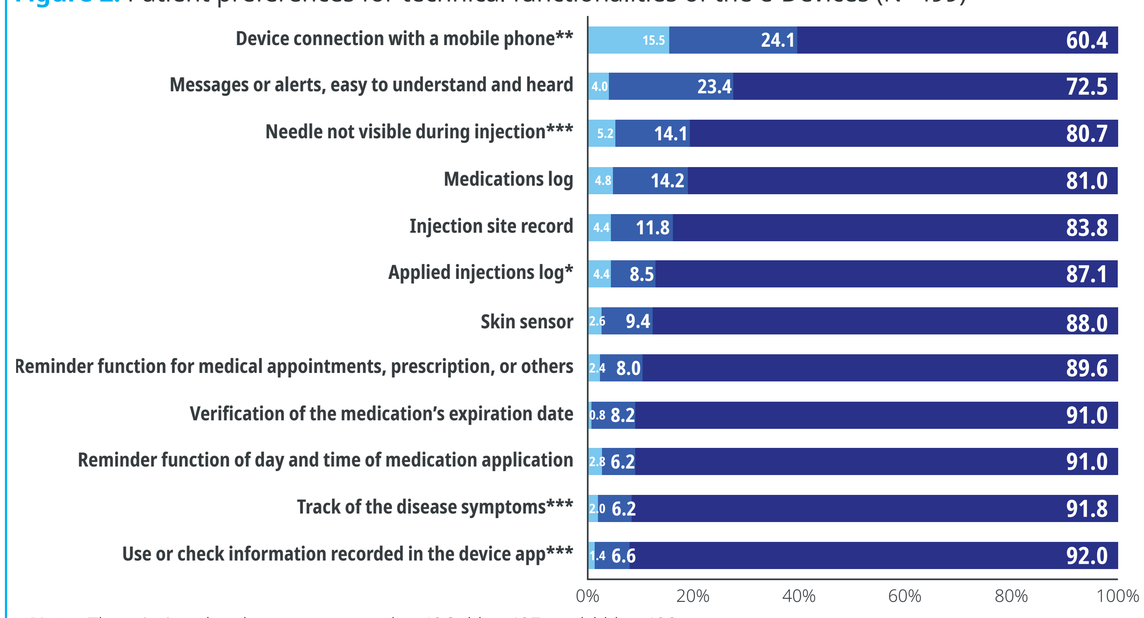
Table 1 and Figure 1 show the sociodemographic and health characteristics of the study participants. A total of 449 patients from 23 regions (cities/departments) in Colombia completed the survey. The most common diagnosis reported was RA (71.1%), followed by axSpA (15.8%), PsO (6.6%), and PsA (5.8%). The median age was 57 years (IQR, interquartile range: 50-61).

Figure 1. Study population in Colombia



- **Digital experience:** The most used digital equipment was the smartphone (83.3%); followed by desktop computer or laptop (50.9%), basic mobile phone (42.7%), tablet (22.2%), and smartwatch/ activity tracker/heart rate monitor (13.4%). The use of digital equipment was perceived by 52.5% of patients as "normal", followed by "comfortable or very comfortable" (30.8%), and "very uncomfortable or uncomfortable" (16.6%).
- **Patient preferences:** The preferences for technical functionalities of e-Devices are presented in figure 2.

Figure 2. Patient preferences for technical functionalities of the e-Devices (N=499)



Note: The missing data by no response: *n=496, **n=497, and ***n=498
Abbreviations: N/n, patient number

CONCLUSION

Patients with rheumatic or dermatologic diseases treated with etanercept value as useful the functionalities of the e-Device that complement treatment administration. This suggests a patient preference for e-Device with these features.

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FINANCIAL DISCLAIMER

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