Sciensus

Fastest route to patients in Europe

Hybrid Digital Support for Patients Receiving Biosimilar-Adalimumab Therapy for Immune-Mediated Inflammatory Disorders: 12-Month Persistence and Impact on Adherence

PCR123

Alastair MacDonald, BSc[1], Adan Jama, BA[1], Warren M. Hart, MSc[1], Saad Wali, BSc[2].
[1]Sciensus, London, United Kingdom, [2]Principal Consultant, Visionet Systems, East Windsor, NJ, USA.

Introduction

- Sustaining medication adherence for chronic conditions is a significant global healthcare challenge, leading to poor clinical outcomes and increased economic burden.[1]
- Only about half of patients with chronic diseases take their medication as prescribed.[2]
- Patient support programs may help in improving adherence and empowering patients.[3]
- All patients in this study received in-home dispensing as the base case of support.

Objectives

- To analyse the real-world impact of different patient support models—digital tools, in-person or remote nursing, and a combination of both—on medication adherence and persistence.
- Digital services included personalized and combined support options, dependent on the patient need. It included 24/7 access to a mobile app, self-serve prescriptions, as well as in-person and remote nursing support.

Methods

- **Study design:** A real-world, retrospective database study.
- **Patient cohort:** 35,990 new patients initiating home-based, self-administration of Biosimilar-Adalimumab injections.
- **Intervention groups:** Patients were segmented into four distinct support categories:
  1. **Base support:** Dispensing and home delivery of the drug, initial in-person training of the injectable device
  2. **Nurse support:** Base support + ongoing in-person and remote nurse support
  3. **Digital support:** Base Support + 24/7 access to the mobile app
  4. **Combined support:** Base Support + in-person and remote nurse support + 24/7 access to mobile app

Results

Table 1
Patient demographics

Support category	Female (%)	Age<30 yrs (%)	Age 30-60 yrs (%)	Age >60 yrs (%)
1 N= 9,101	56	20	54	26
2 N=11,906	60	16	49	34
3 N=5,006	56	16	66	18
4 N=9,977	58	16	62	22

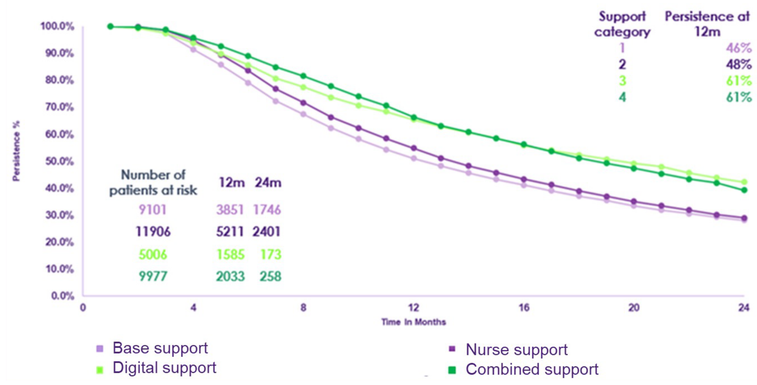
Patients in the digital support groups were almost twice as likely to be adherent at 12 months compared to those receiving only base support.

Table 2
Probability and odds of treatment adherence at 12 months

Support category	Digital (%)	Non-digital (%)	Odds ratio (95% CI)	P-value
Combined support vs Base support	60.9	45.7	1.85 (1.71, 2.01)	<0.0001
Combined support vs Nurse support	60.9	48.2	1.67 (1.55, 1.81)	<0.0001
Digital support vs Base support	60.7	45.7	1.84 (1.68, 2.01)	<0.0001
Digital support vs Nurse support	60.7	48.2	1.66 (1.52, 1.81)	<0.0001

Patients using the mobile app (with or without in-person nursing support) showed significantly higher persistence at 12 months.

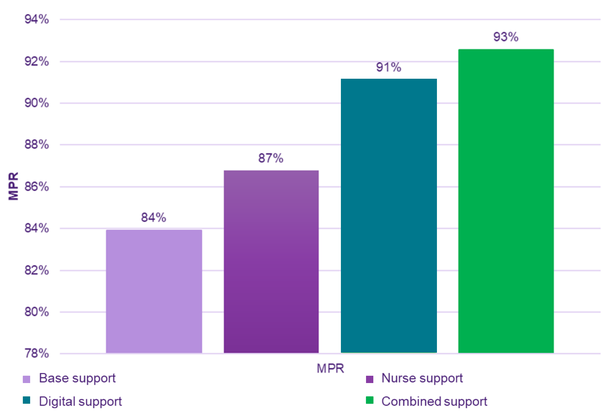
Figure 1
Probability of remaining on treatment (Kaplan Meler)



The digital support and combined support groups demonstrated significantly higher 12-month MPR* compared to non-digital groups (p<0.001).

*Medication Possession Ratio (MPR) is a measure of adherence calculated as the percentage of days a patient has medication available over a period (≥80% is often considered adherent).

Figure 2
MPR across all study groups



In a related analysis, the mean MPR in 111,788 users was compared before and after they adopted the app support. The average MPR increased significantly after app adoption.

Figure 3
Impact of app adoption on MPR

Conclusion

- **Digital support enhances medication adherence:** Integration of digital support in the form of a mobile app led to a statistically significant boost in long-term medication adherence and persistence, proving that digital tools can meaningfully change patient behaviour.
- **Best results with combined human and digital touch:** Digital tools along with in-person nursing support led to the highest patient persistence. Combining various channels creates a seamless, continuous support system for patients, resulting in potentially better outcomes.
- **Scalable solution for sustained engagement:** Digital patient support systems offer a powerful, scalable way to engage patients, improve treatment outcomes, and tackle non-adherence across multiple chronic conditions.

1. van Boven JF, Tsiligianni I, Potočnjak I, et al. European Network to Advance Best Practices and Technology on Medication Adherence: Mission Statement. Front Pharmacol. 2021;12:748702.
2. Brown MT, Bussell JK. Medication adherence: WHO cares?. Mayo Clin Proc. 2011;86(4):304-314.
3. Marengo MF, Suarez-Almazor ME. Improving treatment adherence in patients with rheumatoid arthritis: what are the options?. Int J Clin Rheumtol. 2015;10(5):345-356.

Contact: **Alastair MacDonald, BSc**
Global Head of Medical Affairs and Growth Strategy at Sciensus
Alastair.MacDonald@sciensus.com

PAR6341125 Implementation Date: 04/11/2025