# Digital, for easier and faster access to real life patient data

**The development of digital technologies offers the opportunity for pharmaceutical companies to think about doing things differently and better in many of their activities. ALCIMED, a consulting company in innovation and new businesses, analyses the opportunity offered by digital technology to acquire real-life patient data more easily and quickly.**

*Paris, 27th of May 2019.* Real life data are generated as part of current medical practice, outside the constraints inherent in the implementation of conventional clinical studies. Pharmaceutical companies are increasingly using this data to guide their decisions throughout the life cycle of their products, whether in terms of epidemiology, efficacy and safety of treatments, or medico-economic impact. In addition, the American (Food and Drug Administration) and European (European Medicine Agency) regulatory agencies have confirmed their desire to make greater use of real life data in the processes of authorising the marketing of pharmaceutical products[1].

In an increasingly digitalized environment, health professionals have begun to capitalize on digital devices in order to capture real life data directly through patients. In fact, technological advances now allow the generation of a large number and variety of data with less effort for patients and in a less constraining environment than that of the hospital[2]. In France, many actors are already active on the subject and use digital technology to access real life patient data.

## Generation of health data via digital applications and connected devices

Real-life patient data can be obtained as subjective information, through electronic questionnaires completed manually by patients, or as objective information generated by connected objects and other sensors integrated into digital devices (mobile phones, smart watches, etc.). In addition, particularly through applications, it is also possible to offer tests for patients and thus generate data on their physical (e. g. walking test) or cognitive (e. g. logic test) performance[3]. The French start-up **Ad Scientiam**, with the support of **Roche France**, has developed a digital application, **MSCopilot**, to monitor patients with multiple sclerosis. The application offers self-assessment tests to measure patients' health status, taking into account 4 parameters: their ability to move, their cognitive abilities, their dexterity and their visual acuity. This solution allows more frequent data to be generated on the potential occurrence of symptoms outside the doctor's office, thus allowing more accurate monitoring of the disease's progress. Launched in France in November 2017, **MSCopilot** is the first dedicated application developed by **Ad Scientiam**, which is now working on other diseases such as benign prostatic hyperplasia or atopic dermatitis[4].

The use of connected tools to generate health data is growing considerably in France. **Digital Medical Hub**, the first platform for evaluating and analysing data from connected objects, was established by the AP-HP (Assistance Publique des Hôpitaux de Paris) and in particular at the **Bichat-Claude Bernard Hospital**. In January 2018, in partnership with **Docapost**, a part of the La Poste group dedicated to digital technology, the Digital Medical Hub launched its first study to assess the relevance of connected objects for patients who have undergone lung transplantation. The two-year study will

[1] https://f1000research.com/articles/7-111/v1

[2] https://www.ert.com/wp-content/uploads/2017/05/PV0517-mHealth-ERT.pdf

[3] https://healthpolicy.duke.edu/sites/default/files/atoms/files/mobilizing_mhealth_innovation_for_real-world_evidence_generation.pdf

[4] http://www.adscientiam.com/

measure the impact of regular and remote monitoring of patients' health status on the quality of care and the doctor-patient relationship[5].

One of the major French studies using connected objects and machine learning in health was recently conducted by **Sanoïa**, a clinical research organization specializing in digital technology, in partnership with the **Pitié-Salpêtrière** Hospital and **Orange Healthcare**, the health department of the Orange Group. Physical activity of 170 patients with rheumatoid arthritis and spondylitis was evaluated using an activity sensor for 3 months. The results showed that the patient's activity could indicate a flare-up of rheumatoid arthritis or spondylitis with a 96% reliability. These results open up perspectives for the integration of connected objects in chronic arthritis monitoring[6,7].

## Social media as a source of real life data

The past years, social media has been increasingly used as a source of real life data collection. In fact, patients use discussion forums to share their opinions or have access to those of other patients regarding a pathology or related treatments. **Carenity** is a social network dedicated to patients with chronic diseases. Initially established in France, it now brings together a community of more than 300,000 patients and doctors around more than 1,200 chronic diseases across Europe and the United States. The company also conducts analyses on patient-generated content on the platform to communicate real life data to academic institutions or pharmaceutical industries.[8] **Kap Code**, a French start-up, conducts the same type of analysis using social media data sources, such as discussion forums, Facebook, and Twitter.[9]

## Ways to centralize patient data

In addition to having an important role in the generation of real-life data, digital technologies also make it possible to consolidate patient data from various sources. **Docapost** has therefore initiated a large-scale project and created a Digital Health Space, collecting and consolidating various health data in the same place. In this context, Docapost launched in January 2018 a mobile application, **La Poste eSanté**, which centralises data from connected objects, mobile health applications, vaccination registers, medical questionnaires, etc. Patient data can be shared with HCPs to facilitate diagnosis and choice of the right treatment, and at the same time ensure closer follow-up of the patient.[10]

In the near future, blockchain technology will push the consolidation of patient health data even further. Blockchains are digital systems for storing and transmitting data in blocks, guaranteeing data security and traceability. **Embleema**, a startup specialized in healthy blockchain, has developed the **PatientTruth** solution, which allows patients to save their complete medical history from diverse sources. These types of solutions offer a high level of security and confidentiality of patient data, and guarantee patients control over their health data. Following the launch of the solution in the United States in 2018, the startup plans to enter the French market this year, once its platform has been adapted to local needs and specific regulatory constraints.[11]

Lambert Lacoste, project manager at ALCIMED, concludes that "there will surely be a change in the way we approach the use of digital for real life studies. Digital technologies offer the opportunity to speed up and potentially reduce costs, compared to current practices. The question will no longer be whether to use these technologies, but rather how to integrate them into your business." He added: "This will have an impact on the way pharmaceutical companies work and open up to new collaborations with stakeholders in the field, but also on the set of skills they would gather within their organization."

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[5] https://www.aphp.fr/contenu/ap-hp-creation-de-la-premiere-plateforme-devaluation-et-danalyse-des-objets-connectes-en
[6] http://rmdopen.bmj.com/content/3/1/e000434
[7] https://www.orange.com/fr/Press-Room/communiques/communiques-2017/Orange-Healthcare-et-Sanoia-valident-l-utilisation-du-Machine-Learning-pour-le-suivi-des-Rhumatismes-Inflammatoires-Chroniques
[8] https://www.carenity.com/espace-pro
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[11] http://whitepaper.embleema.com/

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Alcimed is a member of CroissancePlus and the ACI (Association des Conseils en Innovation – Association of Consultants in Innovation).

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