



kayentis

The best of both worlds

# SUCCESS STORY

## REGISTRIES

So intuitive to collect data  
So effective to share information

## KAYENTIS SOLUTIONS HELP MEDICAL RESEARCH CENTRES RUN REGISTRIES

### AP-HP ANTOINE BECLERE HOSPITAL



HTAP Registry is based at the Pneumology Department, Hospital Antoine Bécclère in Paris. Opened in 1971, Hospital Antoine Bécclère has a double vocation

of hospital of proximity and teaching hospital establishment. It is part of Assistance Publique hospitals and it covers the health needs of a population of approximately 300 000 inhabitants. It currently has 430 beds and is structured around 9 clinical departments.

**Background:** The first challenge is to collect patient data from sufferers of Pulmonary Hypertension (PH) and elaborate about PH being a rare disease to increase the knowledge of this disease and hence improve its treatment all over France. The second is to enabling doctors to share knowledge and ensuring that patients receive the best possible treatment. The main challenge is to find a system that would be quick and easy to use.

**Solution:** The Digital Pen and Paper solution, developed by Kayentis and based on Anoto Digital Pen and Paper technology is a customized solution created to collect data using uniquely patterned Case Report Forms. Physicians can access and query the database of collected data dynamically using a complete web based application

KAYENTIS is the leading vendor and operator of solutions that transmit handwritten text from paper to digital media for the healthcare industry.

Based on KAYENTIS' Digital Pen and Paper platform, these solutions bring together the best the physical and digital worlds have to offer: the easiest collection method (paper and pen) offering the highest data quality combined with all the advantages of electronic management (real-time access to data, accurate timestamps, audit trail features, alerts, distribution of relevant information to the right persons).

KAYENTIS' solutions are used for over **50,000 patients in 50 countries**.

KAYENTIS is a member of the Medicen, Lyon Biopôle, Pennsylvania BIO and BIO New Jersey clusters. Kayentis is an Anoto Platinum Partner, an Oracle Partner and an HP Solution Business Partner.

**For more information, please visit: [www.kayentis.com](http://www.kayentis.com)**



Kayentis is one of ANOTO's very first international partners and has earned the distinction of being an Anoto Platinum Partner.

### BENEFITS

- Doctors collect and submit patient data quickly and easily
- They can access all information about their patients and extract reports, charts and statistics to support their work
- Unique pattern and secured data transfer ensure traceability and confidentiality of patient data collected
- Print on demand feature allows to print additional sections to continue monitoring enrolled patients

## WHAT THE EXPERTS ARE SAYING

### Dr Azzedine Yaïci

*Pulmonary Hypertension national register coordinator  
Hospital Antoine Béclère*

// This technology gives us an easy and efficient way of collecting and processing information about pulmonary hypertension. We can already see how the centre's coordinated approach is bringing tangible benefits to patients. //

A national program for the collection of data about people suffering from Pulmonary Hypertension (PH) was set up in France in 2006. Since January 2007, the Pneumology Department has employed Digital Pen and Paper (DPP) technology, and doctors in a network of 24 regional hospitals are using it to gather and submit information to a national database. Thanks to an initiative led by Professor Gérald Simonneau, the Pneumology Department of the French Hospital Antoine Béclère in Paris, is now the national centre for the collection of data about patients suffering from PH. By developing a thorough and accurate picture of the disease, the system will give the pneumology departments of all 24 hospitals in the network a chance to share knowledge and best practices.

### About the disease

PH is a rare blood vessel disorder of the lung in which the pressure in the pulmonary artery (the blood vessel that leads from the heart to the lungs) rises above normal levels and may become life threatening. The disease is frequently misdiagnosed and has often progressed to a late stage by the time it is accurately diagnosed. Better understanding of and information about the disease will help doctors diagnose PH early and provide patients with more effective care. 15 people out of 1 million may suffer from PH in France.

### Setting up the system

Professor Gérald Simonneau and his team spent several months preparing for this ambitious project. They made contact with hospitals in the regions in order to establish a nationwide network, and discussed how their ideas could most successfully be put into practice.

Under normal circumstances, doctors meet their patients and complete a status report

hospital.

All new patients undergo a thorough interview. During follow up visits, a simpler form is completed, and depending on how the patient is faring, the doctor decides whether to continue ongoing treatment or to pursue another option.

### Immediate success with DPP

The team at Observatoire HTAP decided to collect this data using a DPP solution. Since this immediately proved to be such a simple and convenient method, they decided not to search for alternative technologies.

During consultations, the doctors use their digital pens to fill in paper forms with Anoto Technology. They then place the pen in a docking station, from which the new information is immediately uploaded to a central database. The doctors keep the paper copy for their own records. Every month, the centre also issues an automated report to each hospital in the network, based on information submitted from each doctor's own patients

### Expanding the solution

There are currently 60 pens in use at the 24 participating centres. So far, data concerning more than one thousand PH patients has been collected and the number will continue to increase as the program objective is not limited in terms of number of patients monitored. In the future, staff at the centre hopes to expand their project and employ an even more sophisticated version of the form, which allows collection of more detailed, qualitative information.

To solve the challenge of doctors' time being so limited, the centre hopes to get funding for one dedicated employee at each hospital. The project might also be expanded into a separate

about three times a year. If a patient's condition is unstable, the frequency of meetings is increased, and the patient might even be brought into

project at other hospitals in Europe.

### Benefits of the DPP solution

- User-friendly DPP technology makes it quick and easy for doctors to collect and submit patient data.
- The information is continuously being updated with input from recently enrolled patients or from those already in the program.
- Doctors can access information about their own patients and extract reports, charts and statistics to support their work.
- Staff at the centre in Paris can access all patient data collected from around the country and use it to improve the understanding of the disease, and hence, patient care.
- Unique pattern and secured data transfer ensure traceability and confidentiality of patient data collected.
- Print on demand feature allows Béclère Center to print additional sections to continue monitoring enrolled patients.

Dr Azzedine Yaïci, Pulmonary Hypertension national register coordinator, says, "I get calls from other research centres where they have heard about the data collection technology we're using and are very interested in learning more about how it works. That's a sure sign we're onto something here!"

# SUCCESS STORY

## REGISTRIES

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