open. solutions in telemedicine

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Centralized service orchestrating a secured return home

summary

For the past two years, the Magnolias geriatric hospital has offered a secured return home service for its patients and the benefits are clear. The hospital is now launching a joint project with the H2AD® platform using telemedicine to optimize the continuity of care in care centers for the dependent elderly (EHPAD) located in the north Essonne region of France.

It is no accident that Roselyne Bachelot chose to visit the Hôpital Gériatrique Les Magnolias (HPGM) to illustrate the benefits of an all-round health and medical-social geriatric healthcare offer, on National Alzheimer's Day on September 21st last year. Accompanied by the Secretary of State for the Elderly, Nora Berra, the French Minister for Health was able to see for herself just how effectively a healthcare institution can combine advanced technology with a humane approach to geriatric care.

While the Essonne-based hospital is renowned for its compassionate, Gineste-Marescotti-type approach, staff are equally aware of the benefits to be derived from today's emerging technologies.

Two years ago, the hospital's forward-thinking manager decided to offer patients the secured home return service set up by H2AD®. Evelyne Gaussens remembers that her decision was not without its critics. "Any change, whether it's a system like the secured home return or a philosophy like "Humanitude", breaks with tradition and is not always greeted with open arms!".

Reduce time spent in hospital

It is also true that, in the space of a few years, radical changes in the way the healthcare system functions (activity-based financing or T2A), have meant that French hospitals have moved away from being in no rush to discharge patients to actively seeking to reduce the time they spend in hospital,

Roselyne Bachelot visits the “healthy and at home” complex at the Magnolias hospital.

points out Evelyne Gaussens. “In fact, this reflects how the elderly themselves feel, since all the surveys show that they want to get home as soon as possible and stay there for as long as possible!”, she states.
When she discovered the secured home return system, the hospital’s director realized that it presented an ideal means of meeting her budget objectives whilst in no way compromising the quality of the services provided by the hospital. The result has been a reduction in the average stay at the HPGM to 9 days (versus the 11-day national average, bearing in mind that it was 20-25 days before the advent of T2A!). But most importantly for Evelyne Gaussens is the positive impact the new system has had on patients and their families. “Just knowing that patients were more secure would be enough motivation for me, even if the system didn’t lead to cost savings”, she insists.
Nonetheless, the cherry on the cake is the fact that a one day reduction in the average stay is enough to cover the cost of the new service for the hospital.
How is the secured home return system organized? Catherine Lainé, who is seconded to the hospital from H2AD®, has her office a stone’s throw away from the admissions desk. At the entrance to the dedicated area, a poster states in bold letters “I want to stay healthy and safe at home”. A short walk through to the next room and the coordinating nurse has created a cozy, welcoming office. Two walls are lined with glass cabinets displaying H2AD®’s wares, which include a whole range of phones, alarm pendants and teleassistance bracelets for different dependency needs.

The D2P® Patient Record is a central feature

However, Catherine Lainé spends most of her time in the hospital wards and outpatient clinic, meeting patients and working closely with the ergotherapist to find the right device for a given patient.
Patients covered by the secured home return service are given a credit card-type card showing the “My health at home” platform’s 24/7 call line number, which is valid for a period of 45 days. The card also bears the logos of the hospital and of the insurance company Europ Assistance, whose job is to transfer patients back to hospital… if and when this proves necessary.
The card is handed out free of charge by Catherine Lainé to the patient or his/her family (this service is paid for by the hospital) in a folder along with an information brochure. She hands out 50 to 60 of the cards a month, one to almost 90% of all the patients returning home. She is rarely refused.
Central to the service is the creation of a medical and social record which is sent to the doctors and on-call staff at H2AD®’s call center in Saint-Etienne. Staff manning the phones at the platform can use the information contained in the record to provide a patient (or patient’s family) with the most appropriate response, as defined in the protocols drawn up by H2AD®’s doctor-coordinator Bernard Viala, if they experience problems once they have been discharged from hospital.
Catherine Lainé therefore extracts the relevant data from the patient’s record and sends the discharge summary to the platform’s D2P® Electronic Patient Record. Since the end of last year, she has had access to the hospital’s new electronic records system. Jointly with the social worker, she also calls into play the services supporting a secured return home, including home help, “meals on wheels”, a cleaner, etc. Where necessary, staff at the platform can get in touch with these service-providers.
The coordinating nurse’s role is not limited to preparing the patient’s discharge from hospital. Every morning, she goes over the previous night’s incident chart and is fully involved in monitoring patients at home. “The service is offered for 45 days but the large majority of calls are made within the first two weeks”, she reports, adding “and it will come as no surprise that most of them are received at the weekend or during the night.”»

Telediagnosis and telemonitoring in care centers for the dependent elderly

To Dr Laurence Luquel, Medical Director of the Magnolias hospital, Catherine Lainé acts as an “indispensible facilitator between hospital and home. Telemedicine in the geriatric sector would be inconceivable without this human added value“. Dr Luquel is currently committed to a medical and healthcare project aimed at improving continuity of care in the North Essonne care centers for the dependent elderly through a partnership with the H2AD® platform. Her belief that “hospital is not a foregone conclusion, what matters is admitting the right patient at the right time and to the right place”

About Les Magnolias

Opened in 1970 by the AGIRC-ARRCO pension fund, the Hôpital Gériatrique Les Magnolias is located in Ballainvilliers, in the Essonne region of France, south of Paris. It offers a complete range of services compiled into a geriatric health and medical-social package.
The hospital has 272 beds and places, and construction work on a new building for the elderly comprising six 20 bed units (80 long term care beds and 40 beds for Alzheimer’s patients) is currently underway.

The secured return home program allows Evelyne Gaussens to meet her quality and budget objectives.

Dr Laurence Luquel is working with the North Essonne EHPAD on optimizing continuity of care.

Catherine Lainé forwards the discharge summary and other data required for follow-up to the shared patient electronic record (D2P®).

is based on her experiences in the Emergency Room and Critical Care Unit. And yet, it is undeniable that medical emergencies or health problems – particularly those arising during the night or at weekends and on bank holidays - in care centers for the dependent elderly are most often covered by the SAMU, France's emergency medical service. It is also true that these emergency medical services know little of the patient's medical history. One of the aims of the project is to overcome these on-call related problems by offering care center staff the help of the H2AD® platform's doctor. And of course, this involves the D2P®, using the patient's medical records, without which the doctor at the call center would be unable to assess the situation correctly from a distance.

In addition to telediagnosis, the service offered will also include telemonitoring. Doctors at H2AD®'s platform will be able to monitor and analyze patients' blood pressure, capillary blood glucose and blood oxygen from a distance. The two-year project will be supervised by a clinical research associate and its results published in the scientific press.

The Magnolias hospital looks set to enter a new phase in the use of telemedical solutions to create a high quality healthcare offer. "We are moving towards joint projects driven and made possible by the Hospitals, Patients, Health and Territories bill," states Evelyne Gaussens. "The future lies in these solutions, but we will have to create a community of care since it will be impossible for individual institutions to stand alone". ■

I Dominique **Lehalle** (DL InfoS)
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"Telemedicine in the geriatric sector would be inconceivable without this human added value".

editorial

Telehealth in action

On an international level, the dividing line in telehealth cuts through the line that separates the rapidly rising economies of the BRIC and assimilated countries from the older, flagging economic powers.

The Brazil-Russia-India-China quartet, commonly referred to by its acronym since it became apparent that this was a new power set to counterbalance the weight of the G6, has included telehealth development in its public health improvement objectives as a matter of course.

Obviously, the sheer geographical size of these countries and the extremely patchy distribution of their resources – not to mention their mobile penetration rate – make them ideal candidates for telemedicine.

In the Western world, the situation is less clear-cut. Although telemedicine first saw the light of day some fifty years ago, its applications were restricted to a few specific situations... until the promise of a solution to the every-growing problems of our overburdened healthcare systems was glimpsed in today's IT revolution.

Some countries were quick to recognize and act on this potential - Northern Europe, for example. Or Switzerland where, in the space of 10 short years, teleconsultations have become while not the norm, certainly commonplace (see our report on page 10 for more details).

A look at the Euro Health Consumer Index sheds an interesting light on the situation. The index compares the performances of the different healthcare systems in Europe from the consumer's point of view, on the basis of 38 indicators, 6 of which concern e-health. From being the shining star on the healthcare firmament, France gradually slid from its No. 1 spot in 2006, descending to 10th place by 2008, before climbing back up to 7th place in 2009. The Netherlands, Denmark and Austria, however, all maintained their leadership positions.

France's decline was, at least in part, due to the poor results obtained for the e-health indicators... The very fact that consumers themselves now include an e-health sub-discipline in the index scoring system should give all those involved in our healthcare system substantial food for thought.

e-health as a sub-discipline in the scoring system

Nonetheless, better late than never, France is finally getting to grips with e-health. Political statements, ad hoc missions (headed by deputy Pierre Lasbordes, see page 4) and the "Hospital, Patients, Health, Territories" act with its Telemedicine decree - currently in the process of finalization -: all indicate that e-health is at last getting the official thumbs-up. Further proof is France's national health service 2010/2013 risk management roadmap, which is part of the objectives and budgetary agreement between the social security fund (CNAM) and the State.

This white paper states that "precedence will be given to refocusing healthcare establishment activities and the development of telehealth tools, particularly with a view to maintaining people at home" and that the national health system will "pay for the cost of a teleconsultation as a first resort in areas whose healthcare needs are insufficiently covered". The health system will also "experiment with telemonitoring of patients", using the example of congestive heart failure (more on this in our report on page 6). Finally, the CNAM takes a stance in favor of e-prescriptions and points out that "progress in payment methods should make these new tools easier to use, either by providing assistance with the purchase of the equipment required or by integrating incentives to their use into medical procedure fees or performance-related pay schemes".

Now is the time to act!

I Dominique **Lehalle**

"All we need now is the government's green light"

Appointed by François Fillon to conduct an enquiry into the new technology, Pierre Lasbordes presented his "Telehealth: a new asset for our wellbeing" report in October 2009. In this interview, he reiterates his firm belief that telehealth and telemedicine must be part of the far-reaching changes affecting the current healthcare system organization.

"There are three key stages in every successful project: set-up, evaluation and correction".

Open solutions in telemedicine (OST):
Your report has been extremely well received and has even led to two of the legal obstacles to the practice of telemedicine being overcome via an amendment to the national health system funding bill (PLFSS 2010 (1).
What has happened since then… nothing?

Pierre Lasbordes:
Quite the contrary. The report has created quite a buzz. I was in contact with the Minister for Health throughout the enquiry and she is extremely interested in the subject.
The last remaining barriers to the practice of telemedicine are mainly to do with legal and financial aspects, but these should be resolved by the implementation orders for the Hospital, Patients, Health, Territories (HPST) bill which are set to be published in the coming weeks. The measure introduced in the PLFSS 2010, authorizing the sharing of medical procedures for the practice of telemedicine, is already a massive stride forward.
We will also have to work with the national health insurance system towards launching pilot studies.
Certainly, there are still obstacles remaining, but the outlook is very positive and I hope that the newly-formed Regional Health Agencies will include telemedicine in their mission statements.
The team working with me on this report is still very much involved and I myself am frequently requested to present my recommendations at professional meetings. We are really trying to reach as many people as we can with this information.
Today, first and foremost, we are waiting for the government's green light, and a strong political statement when the decrees are published. This will show the general public that this is indeed a worthwhile project. I also hope that the subject will be dealt with by the law on dependency. It has already been listed in the Living at Home plan of action established by Ms Berra, our Secretary of State for the Elderly.
I am a very determined person and both I and the team who worked on the report are convinced that telehealth is one of the innovative solutions that will enhance the wellbeing of the country as a whole. We really don't want to see the findings of our enquiry be shelved.

OST: Do you think it will be difficult to win support – from end-users, healthcare providers and politicians – for telehealth?
PL: In addition to uncertainty about the legal and financial aspects of telehealth, there is still a lot of resistance to the new system and this certainly could halt its development. Some of the fears are sociological, the main concern being a sort of de-humanization of medicine.
And yet, telehealth really opens up vast new perspectives, offering improved remote management and diagnosis of patients, strengthening the role of patients and giving them greater responsibility for their own health and encouraging healthcare professionals to work together. The new personal monitoring and treatment devices and greater social connectivity that are an integral part of telemedicine can also be an effective means of maintaining dependent patients in their own homes. Telehealth can also overcome problems related to geographical isolation and equal access to care in densely populated and more deserted areas.
During the preparation of this report, I realized that people in general tended to know very little about telemedicine and were rather apprehensive about the new technology, but not actually reluctant to try it. This is why the last recommendation listed in my report really stresses the need to inform and generate interest and trust in the use of telehealth.
This could be achieved through a massive nationwide information campaign primarily targeting potential users of the system (patients, carers, healthcare professionals and social workers, etc.).
The goal is clear: get telehealth accepted and drive changes in professional practices.
In parallel, the success of telehealth really depends on how it is rolled out. This is why the telehealth implementation plan must include appropriate training for all healthcare professionals, social workers and carers.

OST: You recommend appointing an interdepartmental Telehealth commission. What would you expect from such a commission, given all the new organizations that are being formed and which tend to further confuse an already complex healthcare system in France.

PL: I suppose it could be seen that way, as an additional complication to deal with just when the Minister for

Pierre Lasbordes, parliamentary Deputy for the Essonne region, vice-president of the Parliamentary Office for the Evaluation of Scientific and Technological Choices.

Health is in the process of modifying the way healthcare is organized. However, I think the commission should be seen as a temporary structure, designed to "kick start" the machine into action. It would heighten the profile of telehealth which might otherwise be drowned in the vast sea of today's health information technology project. The commission could eventually be integrated into the currently emerging Health Information Systems Strategy.
Given that telehealth comes under the aegis of several ministries, its deployment will require firm governance, guaranteeing true "ministerial interoperability" and involving all the ministers concerned. A task force, if you will.
I strongly believe that telehealth must be seen as a separate entity: it is a cultural revolution that should presented clearly as a new approach to healthcare and not a means of establishing a "low-cost" medical service.
The future interdepartmental structure must take into account these sensitive healthcare and social issues, assure technology intelligence and be capable of evaluating the approach. I believe that there are three key stages in every successful project: set-up, evaluation and correction. This is how I would also like to see telehealth treated. ■

I Interview by D.**L.**

(1) The national health system funding bill 2010 approved the sharing of medical procedures by healthcare professionals within the framework of telemedicine and reimbursement of fees for virtual medical appointments (teleconsultation).

"We need a massive nationwide communications plan targeting consumers"

The Continua Alliance: a connected world

The industrial initiative Continua promotes interoperability in the telehealth ecosystem. Explanation.

Since its launch in June 2006 by a consortium of 22 founders (1), the Continua initiative has continued to grow and now has 220 members.
A not-for-profit organization, Continua is an open industrial alliance whose aim is to bring together the world's leading technology and healthcare organizations.
A primary aim is to create an interoperability framework to ensure that newly evolving e-health devices and services are compatible. The first step has been the creation of the "Continua certified" label, a logo guaranteeing that certified products meet the recommendations and standards of the industrial community.
The logo gives clients the promise of interoperability with other certified products in the telehealth ecosystem. And like all labels, it should make it easier for consumers to identify the product best suited to their needs.
For organizations, certification is an additional market development lever since it is seen as reassuring by future consumers and helps overcome resistance to using the new telehealth solutions.
Continua focuses its efforts on three major issues: chronic disease management, health and care monitoring for the elderly and fitness and nutrition coaching.
The first Continua-certified telemedicine blood pressure cuff and scales were launched at the end of 2009. Both are Bluetooth devices manufactured by the Japanese company A&D, which has built a reputation for innovation in this sector.
At the start of the year, Continua used the Consumer Electronics Show in Las Vegas, THE international consumer electronics innovation trade fair, as the ideal occasion to showcase its "end-to-end" connectivity.
Three of the Alliance's members (IBM, Nonin Medical and Vignet) demonstrated how a home-based wireless (certified of course) pulse oximeter sends data to a platform to be securely retransmitted by server to various medical information systems.
Very recently, GSMA (2) joined forces with the Continua Alliance to work on standardization processes in the wireless healthcare sector, publishing a set of industry guidelines for embedded mobile solutions. This is hardly surprising in view of the endless potential these devices represent for telehealth, the so-called "m-health" revolution (m for mobile) which, obviously, has sparked the interest of mobile operators worldwide. ■

I H.**O.**

"End-to-end" connectivity

Version 1 of Continua's "Design Guidelines" was published last year and mainly covers use of current standards for personal health equipment. The next set of recommendations integrating additional wireless specifications will be issued in mid 2010.

To find out more:
http://www.continuaalliance.org/
http://www.gsmworld.com/

(1) Including Cisco, General Electric, IBM, Intel, Kaiser Permanente, Medtronic, Motorola, Panasonic (Matsushita Electric), Royal Philips Electronics and Samsung.
(2) The GSMA (GSM Association) unites nearly 800 mobile phone operators in 219 countries

agenda

Med-e-tel 2010
14-16 April
International ehealth meeting and trade fair organized by the ISfTeH (International Society for Telemedicine and eHealth), **in Luxembourg**. In English. One session in French: New healthcare organization and ICT solutions (on 15 April). More information:
http://www.medetel.lu

World Health Care Congress – Europe
19-20 May
6th annual meeting for 400 healthcare sector leaders. Agenda includes Telemedicine, mHealth (m for mobile) and telemonitoring of the chronically ill. To be held **in Brussells.**
http://www.worldcongress.com/events/HR10015/index.cfm?confCode=HR10015

HIT Paris 2010
18-21 May
Using information technology for enhanced care, disease management and decision-making. Agenda includes a Telemedicine and professional cooperation day, scheduled to take place on May 19.
Paris, Porte de Versailles.
http://www.health-it.fr

pHealth 2010
26-28 May
7th international conference on personalized health technologies including microsystems, smart fabrics, sensors and monitoring devices, etc. **In Berlin.**
http://www.phealth2010.com

Autonomic Paris 2010
9-11 June
International trade fair for professionals and the general public focusing on independent living and in-home support, 6th National Independent Living Conference.
In Paris, Porte de Versailles.
http://www.autonomic-expo.com

IEEE HealthCom 2010
1-3 July
International eHealth and Gerontechnology conference organized by the IEEE (Institute of Electrical and Electronics Engineers). Telecoms, networks for health.
In Lyon. http://www.ieee-healthcom.org

Congestive heart failure: from network to telemedicine

Network management has already proven its value for heart failure patients, with regular nursing care visits and intensive patient education reducing the number of cases re-admitted to hospital. Resic 38 is an excellent example of this. Vital sign tele-monitoring should further improve quality of care.

Dr Yannick Neuder took part in the very first "Evaluation of Telemedical management of congestive heart failure" in France.

"800 000 patients, 120 000 new cases reported each year, 150 000 hospitalizations and an average hospital stay of 13 days". Dr Yannick Neuder uses a few key figures to paint a picture of congestive heart failure in France and goes on to state: "While we will always have the same number of beds, we are treating more and more patients". The head of the Functional Congestive Heart Failure Unit at Grenoble's Teaching Hospital continues: "we are going to have to find ways of reducing the number of patients admitted to hospital, and the amount of time they spend there." This has become increasingly necessary since, as a 2005 report by the INSERM-Réseau Sentinelles (French National Medical and Scientific Research Institute-Sentinel Networks) warned, "the prevalence of heart failure increases with age and the burden on the healthcare system is bound to intensify in the coming years as life expectancy increases and the population ages".

Dr Neuder has already started work on providing these means by creating the Resic 38 health network, over which he presides with Dr Gérard Grosclaude, a private cardiologist. He is now anxious to move on to the next step: remote monitoring of patient data through telemonitoring devices.

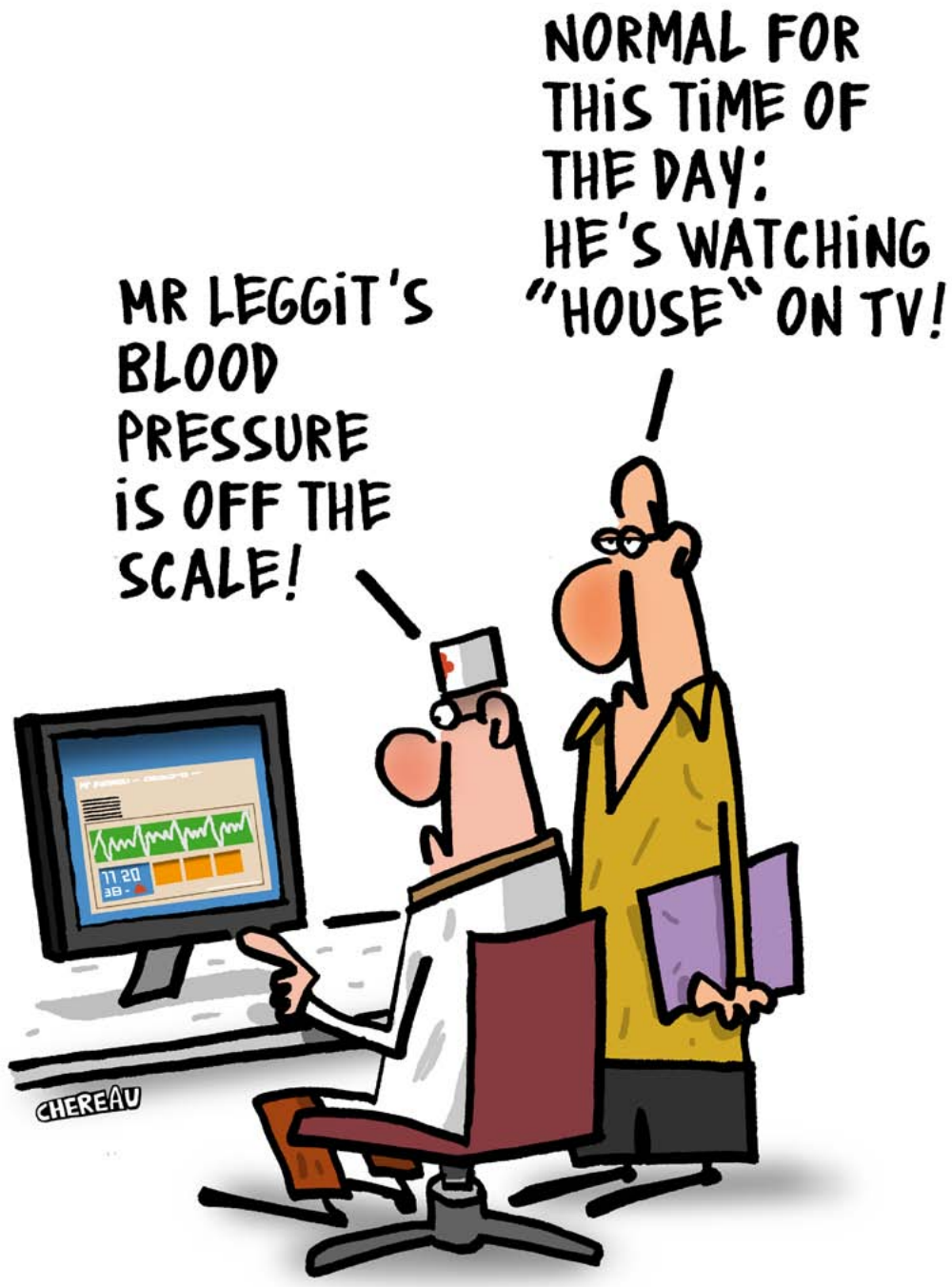
Regular monitoring by a nurse

Resic 38 is now one of the largest networks in the Rhône-Alpes region of France, and monitors 150 patients every year. It involves more than 1400 healthcare professionals, from GPs and cardiologists to nurses, physiotherapists, pharmacists and psychologists. Any fears healthcare professionals working in the community may have had about the system were quickly laid to rest, and they now enroll 80% of their patients in the network.

Resic 38 organizes both professional training and patient education schemes. "Keeping abreast of the latest developments and best practices is indispensible in cardiology where know-how and treatments evolve rapidly", says the network's president.

Once enrolled in the network, patients generally receive care for a period of one year, which encourages them to take greater responsibility for their health, follow their diet and lifestyle rules and take their treatment as prescribed. "Once patients have joined the network, they feel safer and don't want to leave it!", reports Yannick Neuder. These patients are offered

“By equipping our patients with the smart scales and blood pressure monitors already available from H2AD®, we will be able to monitor changes in their clinical signs”



a weekly visit with a nurse – prescribed by their GP – during which their weight, blood pressure and treatment compliance are checked and they are taught how to self-monitor and recognize warning signs.
A network organization tends to limit emergency hospitalizations since a cardiologist is contactable 24/7. If hospitalization is unavoidable, the SAMU 38 (Regional Emergency Medical Service) manages the Resic 38 emergency phone line from 6.00 pm and has access to the electronic records of the patients cared for in the network.

Telephone coaching and disease management

The positive early results obtained by the network (see the CAREPS evaluation in the inset) have encouraged Yannick Neuder to take this disease management approach even further. Now, a coach phones patients as soon as they are discharged from hospital to make sure they have understood their illness, its treatment and the lifestyle rules they must follow to reduce the risk of being readmitted to hospital.
Dr Neuder is already looking towards the next step. “By equipping our patients with the smart scales and blood pressure monitors already available from H2AD®, we will be able to monitor changes in their clinical signs and make sure that paramedical staff visit the homes of those patients most in need”. This new possibility is eagerly awaited by Dr Neuder who took part in the very first “ Evaluation of Telemedical management of congestive heart failure” project in France in the early 2000s (1).
The first test phase, involving about 50 heart failure patients, is scheduled to take place this year, and will validate both feasibility and patient acceptability. It will be conducted by the TASDA (Alps Health at Home and Independent Living Technopole) Association which, since december 2009, combines the resources of the regional teaching hospital and the Grenoble competitiveness cluster, Minalogic, working closely with the National Reference Center for Health at Home and Independent Living (3). ■

D.**L.**

(1) EPICT study published in November 2004. ITBM-RBM Volume 25, Issue 5, Pages 289-291
(2) Jean Debeaupuis, president of Grenoble’s CHU, chairs the association
(3) Centre National de Référence Santé à domicile et autonomie, chaired by Professor Alain Franco, president of the International Society of Gerontechnology

Return on investment

According to the CAREPS* evaluation report on Resic 38, the number of full hospitalizations drops sharply after a patient is taken on board by the network. The average number of days spent in hospital per patient has also decreased by 52%.
The report also clearly points out that the resulting savings (hospital costs divided by 2.3) largely justify the budget allocated to network running costs and indicates that monitoring – mainly by paramedical staff – tends to obviate the need for more costly procedures. This is undeniably a good return on the initial investment.

**Centre Rhône-Alpes d’Epidémiologie et de Prévention Sanitaire or Epidemiology and Health Prevention Center, May 2008.*

Bearings

For Pierre Simon and Dominique Acker*, who have explored all the potential applications of telemedicine, congestive heart failure is “currently one of the most costly conditions to treat and as such, in terms of both quality and efficacy of care and financial burden, stands to benefit hugely from home telemonitoring”. This statement is based on cases and studies in several countries (Canada, Denmark and Belgium).
In France, “acute congestive heart failure is the most common reason for hospitalization of patients aged over 65; it has a higher mortality rate than infarction”, pointed out Dr Damien Logeart (Lariboisière hospital), at the European Meeting of the French Cardiology last January, when he presented the first results of the OFICA (French Acute Congestive Heart Failure Evaluation Report).

**Authors of “The role of telemedicine in healthcare organization”, November 2008, Ministry of Health.*

In-home support: Sadir Assistance's projects

For the past two years, Sadir Assistance has relied on H2AD®'s medical call center to operate the night shift and weekend on-call service for its 7000 patients. The company's director, Jean-Louis Fraysse, would now like to offer a secured return home service for patients with cancer and respiratory failure.

Located in the suburbs of Toulouse and with five satellite sites scattered throughout the Midi-Pyrénées region, Sadir Assistance has some 7000 patients signed up for the medical services it offers. These services are many and varied, ranging from supplying and maintaining medical and technical equipment for home use to education schemes for patients and their families and training programs for healthcare professionals.

Continuity at the call center

The company's specialist fields - respiratory disease, sleep apnea, infusions, artificial nutrition and insulin pump therapy – are enough to keep its one hundred technicians, doctors, carers and office staff busy 24/7.
This is why Sadir Assistance turned to H2AD®'s medical platform for help..
"We have been working together for more than two years and I am impressed with the quality of the service H2AD® provides", says Jean-Louis Fraysse, director of Sadir Assistance. From 6 pm to 8.30 am on weekdays and all weekend, the home health care provider hands over the running of its phone lines to H2AD®'s doctors and on-call staff, and any calls received by Sadir during these out of office hours are automatically rerouted to H2AD®'s platform. While continuity of care is certainly part of the value added of the system, the main advantage lies in the transmission of detailed patient data. "Every day, in the middle of the afternoon, we send H2AD® an updated electronic file listing the equipment used by our patients and the contents of their prescriptions",

Jean-Louis Fraysse gets ready for the arrival of Sadir Assistance at the Toulouse Cancéropôle.

explains Jean-Louis Fraysse. It would be impossible for H2AD® to respond appropriately without this file. An average 30 calls are received every night, most of which concern problems encountered at the start of treatment. "Patients forget how to use their equipment, the machine gets switched off by mistake or the alarm signal starts going off", confides Sadir's director. Whatever the reason for the call, the H2AD® staff member can open the file and either reassure patients directly or, if necessary, refer them to the on-call nurse or technician at Sadir Assistance.

Reducing the time spent in hospital

Satisfied by the professional approach of H2AD®, this year Jean-Louis Fraysse plans to add to the service package offered by the company.
The Toulouse Cancéropôle, a cancer treatment and research facility, is to take over the former site of the AZF factory. Sadir Assistance is already working closely with the regional cancer center and plans to build new 4000 m2 premises at the site. Jean-Louis Fraysse now wants to apply the secured return home system for severely ill patients. "In many cases, these patients could spend less time in hospital, but they are scared to go home, particularly when they are on parenteral nutrition and need regular lab tests". With the help of H2AD®, he now feels that Sadir Assistance is ready to provide this type of monitoring based on protocols establishing alarm threshold triggers and steps to be taken in the event of incidents.
Respiratory failure patients could also benefit from the new monitoring system. These patients decompensate several times a year and are generally admitted to hospital for 5 days. This could be reduced to 3 days if, as soon as the patient is discharged from hospital, in-home nursing care is set up and the patient's condition is remote-monitored via smart devices (blood pressure cuff, scales, etc) transmitting data directly to the H2AD® platform, Jean-Louis Fraysse believes. He also suggests that, as patients would have to

“Optimize the care we provide, treating people, not just patients”.

learn to identify their warning signs, they would become more knowledgeable about their condition. He intends to propose the new system this year to about 50 patients.

Promote compliance and risk prevention

In the more long term, he would also like to see the development of solutions allowing machine-to-machine communication of data recorded by continuous positive airway pressure machines. At the present time, this information is sent as a report to the prescribing physician and the patient’s insurance provider when the annual repeat prescription is requested. Until all the medical devices involved are able to “talk” to each other, all these data are processed manually. Automatisation of the process would not only represent progress from an administrative point of view, but it would also improve compliance and reduce the risks faced by patients with apnea. “The people using CPAP machines are getting younger and younger and their compliance with treatment is often poor, despite the fact that failure to comply places them at high risk”. Based on the conclusions of a study showing the positive impact of telephone coaching on compliance (1), Jean-Louis Fraysse would like to take the solution one step further by collecting the data required for an early diagnosis regularly and in the home.
Furthermore, “our basic rates for the services we offer have dropped”, he points out. “We will have to optimize the care we provide, without forgetting that patients are people first and foremost. With solutions like those provided by H2AD®, we have – virtually – everything we need”. ■

I D.**L.**

(1) Poster presented at the last French Pneumology congress: “Education for patients with sleep apnea syndrome using continuous positive airway pressure machines”.

About Sadir Assistance

Sadir Assistance is a member of the ANTADIR federation, whose treasurer is Jean-Louis Fraysse. The federation maintains close links with professional societies and coordinates medical device vigilance and pharmacovigilance on a national level through its Device Monitoring center. It also carries out medicotechnical, economic and social studies, evaluating and developing at-home treatments for patients with severe respiratory failure. ANTADIR is therefore ideally placed to carry out the analysis and subsequent distribution of respiratory failure data providing a global view of care provision systems and how care is changing, to the different healthcare stakeholders (medical, paramedical professionals and institutional bodies) involved in these patients’ treatment. Finally, the federation develops and offers professional training programs and patient education materials.

meeting with...

“As a department, we aim to be at the forefront of telemedicine”

Georges Ziegler, Development Officer and vice-president of the Loire Department General Council, explains how the Remote Medical Assistance for Public Housing project - AMDHS - meets the Loire’s objectives as regards the demographic, social and economic challenges faced by the region.

Open solutions in telemedicine (OST):
What does the AMDHS project mean for the General Council? What kind of financing have you given it? What return do you expect to get on your investment?

Georges Ziegler :
In-home care means that disabled or dependent adults, particularly those housed in state-owned accommodation, can continue living in their homes while receiving the medical care and any personal devices or systems they require.
In 2009, The General Council invested 65 000 euro in this project, which we feel is exemplary. By the end of the project we hope to have established a set of tried and tested home teleassistance solutions. At the same time, it will give Loire-based companies, including H2AD®, the chance to showcase their know-how in this field with a view to exporting their skills outside the region.
The project therefore has both social and economic repercussions.

OST: Does this project mean that the General Council is seeking to promote the future development of telehealth, as was recommended in the report by Deputy Pierre Lasbordes, for example?

GZ: Yes, absolutely. We have invested heavily in the department to pave the way for the development of new ICTs. The future growth of telehealth looks certain because it is a means of considerably enhancing people’s safety without completely overturning their way of life. As a department, we aim to be at the forefront of these changes. However, we intend to move forward step by step, using our experience to guide us. This is why only 9 apartments were included in the pilot phase. By the end of the second phase, which will be completed at the end of 2011, we hope to have equipped 90 apartments.

OST: To what extent does the Loire department face challenges related to caring for and maintaining the elderly and disabled people in their homes?

GZ: We are facing a real demographic challenge. Population ageing is a major problem in the Loire region, and the demographic projections for the very elderly (over 85 years old) in the coming years are quite extreme. By 2030, 34% of the region’s population will be aged over 60 versus 23% today. The over 60s group will number 206 790 in 2020 as opposed to 169 736 in 2005 (+22%) rising to 220 095 by 2030 (+30%); in 2005, we had 67 946 inhabitants aged over 75: this will rise to 77 664 in 2020 (+14%) and 97 609 in 2030 (+44%); lastly, whereas we had 15 313 people aged 85 and over in 2005, this figure will rise to 28 470 in 2020 (+86%).
It is also a social challenge. The Loire General Council fully supports the right of individuals to opt to remain in their own homes. This is why over 10 000 of our dependent elderly receive a special assisted living welfare benefit (Allocation personnalisée d’autonomie or APA). Firstly we assess the person’s medical and social needs, and then we establish a home care plan which can include a home help, technical assistance, short-term stays in a residential home or home remodeling.
Finally, we are obviously up against a financial challenge. This social service costs almost 38 million euro annually. The budget pays for 3 million hours of professional home care per annum, which is the equivalent of nearly 1875 full time jobs. In total, the Loire General Council allocates more than 106 million euro every year to caring for the elderly both in their homes and in residential care.

OST: What have you achieved with your geriatric policy for 2008-2012 and what do you hope to achieve in the coming years?

GZ: Our policy focuses on four major themes:
- providing a quality and broad-spectrum service for the elderly both at home or in residential care,
- creating an all-round, coordinated care and service package for the elderly,
- developing special care plans for people with Alzheimer’s or similar conditions,
-promoting new and/or alternative solutions

Given that it is currently difficult to obtain health insurance funding to set up residential care homes and where in-home care has its limits, it is time to focus on developing new systems. Some possibilities include adapted housing with home help, small residential units, sheltered housing, day centers or temporary residential care. ■

I Interview by D.**L.**

Switzerland: Teleconsultations become commonplace

Medical call centers are now part of the Swiss healthcare offer landscape, to such an extent that the revised health insurance law opened the debate on actually making them mandatory for insurance providers.
The top two Swiss telemedicine organizations already provide up to ten thousand teleconsultations every day.

The move over to telemedicine will be patient-driven, forecasts Martin Denz, president of the Swiss Society for Telemedicine and eHealth (SATMeH) and the European Health Telematics Association (EHTEL).

Of all the changes affecting the Swiss healthcare system over the past 10 years, the development of medical hot lines are perhaps the most striking. Two large centers opened in 1999: Medgate, in Basel and Medi24, in Bern. Both have since proven to be leaders in the field of telemedicine, with Medgate and its 220 members of staff and 4.2 million users leading the way, followed by Medi24 with 2 million users and a hundred or so employees. Medgate deals with an average of 4500 teleconsultations every day, versus more than 3000 at Medi24. These figures are high, particularly in view of Switzerland's population of not quite 7.6 million.
In 2006, Swisscom bought a 40% share in the Medgate AG holding. And the following year, Mondial Assistance bought out Medi24.
"At the time, the creation of these centers responded to a call for "demand management" by the insurance brokers. In other words, the phone lines were seen as healthcare cost cutting solution", states Dr Martin Denz, president of the Swiss Society for Telemedicine and eHealth (SATMeH), who also heads the European Health Telematics Association (EHTEL). "Since then, they have become a source of medical expertise and are actively involved in disease management. They no longer function as a simple patient triage service but act as true telemedical operators".

Teleconsultation good practices

It is hardly surprising that, when the reform of the Swiss health insurance bill was under discussion, the debate on a mandatory telephone medical advice service was opened. Parliament eventually voted against the idea of forcing health insurance providers to provide a free medical advice 24/7 hotline. Most members agreed that such a system would have its benefits… but not to the point that it should be made obligatory.
The arguments against were financial – would such a system actually reduce costs? -, but above all, concerns were expressed about the quality of the advice dispensed over the phone which, at the present time, is not subject to control.
This gave the SATMeH-driven telemedicine consultation quality standards workshop an additional impetus. "We worked with everybody concerned, particularly the Swiss Medical Association (FMH), to finalize the Guidelines. They cover the independence and neutrality of call centers and training, as well as infrastructural requirements and qualification of the staff operating the phones, providing certification and a framework for a professional code of conduct."
The debate also pushed the makers and shakers in the healthcare world to finally get down from the fence. The Swiss hospitals' association H+ agreed to establish a medical advice hotline but was disinclined to make the system mandatory. The Swiss Insurance Association felt much the same way, declaring that call centers should remain "optional, as they have been in the past, and should be proposed as an integral part of an appropriate insurance scheme, with an appropriate reduction in the premium paid if and when it is implemented."
"These discussions also made it possible to raise the question of care management and integrated care", adds Martin Denz towards which, in his opinion, today's healthcare system must evolve.

Build on the public's medical knowledge

The two big call centers have taken advantage of the political focus on these subjects to highlight their own results. "Two thirds of cases are entirely treated by telemedicine", states Medi24. Its CEO, Kenneth Ruesch, stresses "Both our experience and studies show that 70% of the general public incorrectly assesses the urgency of their medical problem. First and foremost, the aim of telephone medical advice is to build on the public's medical knowledge and generate accountability." After carrying out a joint study with the Emergency Room at Bern's Inselspital, Medi24 was able to show that eight out of ten patients presenting at the emergency room are in the wrong place.
The other Swiss call center giant, Medgate, has reached similar conclusions and now declares it is able to solve a patient's medical request conclusively by telephone in 50 to 60% of cases, which means no need for further referral.
"Although healthcare professionals continue to have their doubts, the move towards telemedicine will be patient-driven", Martin Denz warns. "They have been very pleasantly surprised by the benefits of teleconsultation and appreciate the value-adding mix of convenience and premium quality medical services". ■

D.**L.**

Cyberhealth strategy

The Federal Office of Public Health (Bundesamt für Gesundheit) presented its Cyberhealth strategy in June 2007. Following the example of other similar projects throughout Europe, the strategy includes the creation of a national health portal, the introduction of electronic medical records (by 2015) and a personal insurance card whose microchip can store essential data.

The Jura's industrial assets

Jean-François Loncke, delegate with the Jura's Economic Promotion Mission.

The Jura canton has elected to support innovation and technology transfers and to attract new companies to the area. For the past five or so years, priority has been given to the sectors at the crossroads between information technologies and the life sciences. "We were particularly impressed by H2AD®'s activities as they seem to be a real expression of our willingness to open up the new markets emerging in these sectors, in Switzerland and in the rest of Europe" says Jean-François Loncke, delegate with the Jura's Economic Promotion Mission.

For the Mission, which was set up to support local enterprise, from recruitment and finding industrial partners to identification of markets and clients, the arrival of H2AD® also offers massive cross-fertilization potential with the other business already present in the region.

Certainly, the Jura canton has much to offer the businesses it attracts and, with its strong tradition of industrial know-how, mainly acquired through its tradition of watch-making, is now a major player in the high-tech sector. The "made in Switzerland" label still carries considerable clout.

It is therefore no surprise that Health Solution Platform (HSP) has selected Porrentruy, in the very heartland of the Swiss Jura (which, incidentally, will be a mere 3 hours from Paris by high speed train in 2012), as the base for its connected medical devices and software development operations.

Twitoo gives the general public access to user-friendly telemedical equipment and services designed to promote health and wellness.
Check it out for yourself at www.twitoo.org.

Twitoo® is a novel concept whose secret lies in its simplicity.

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Last step: the on-line "My health space" allows users to manage and share their medical data with designated people.

Easy access to telehealth is also measured in terms of cost, and this is where Twitoo® is unbeatable. From just 1 euro a day (for a 48 month subscription), it is now possible to monitor the clinical parameters (blood pressure, pulse, oxygen saturation, etc.) that indicate a downturn in a patient's health and, even more importantly, take preventive action. Chronically ill patients and their team of healthcare professionals now have the means to adjust treatments and lifestyle/diet recommendations on the basis of regularly monitored and controlled data.

The Twitoo.org site is first and foremost an on-line catalogue of all the telemonitoring devices available. The range of blood pressure monitors, scales, pulse oximeters, glucose monitors, coaguchecks, actimetry devices and holters is accessed by simply clicking on the home page. Each device has its own data sheet and instruction video showing how it works. A "Twitoo® subscriptions" tab completes this information with a list of the different service offers available. A simple click adds the product to the "cart", a process with which many on-line buyers will already be familiar.

The home page features a set of tabs – "How does it work", "Glossary" and "Help", for example -providing direct access to further information.

Users who already have their own system can check its compatibility with Twitoo® using the site's search engine (by name, product family or reference number).

Data received by the system is entered into the "My health space" and converted, into curves for example, so that users and/or their healthcare providers can spot any worrying changes at a glance.

Twitoo.org also targets healthcare professionals and institutions. Both are increasingly aware of the positive impact of telemonitoring on the quality of the care they provide.

telemedicine at a glance

Health data: H2AD® qualified

H2AD® is one of the first companies to be officially qualified to host personal health data. This decision by the Ministry of Health is valid for a period of three years and has been published in the official journal. Since the Kouchner healthcare law came into effect on March 4, 2002, the authorities have established a framework to ensure that health data are handled and stored under conditions guaranteeing their safety and confidentiality, and which allow them to be made available to authorized persons on agreement and to be returned once the agreement has been terminated.

In-home care: 11 proposals

At the request of six healthcare industry partners (including Europ Assistance) and with the support of three patient associations (1), the business consulting company Alcimed performed a study into in-home care. The aim was to suggest ways of optimizing in-home care in France and rationalizing the related costs. Presented to the government in February this year, the results of the study showed that this sector is undergoing strong growth, weighing 29 billion euro (2007 figures), which is 28% of the total budget allocated by the State to the chronically ill and dependent elderly. The study also found that there is a lack of coherent organization amongst the different types of care offered (home hospitalization, in-home support and in-home care) with no clear guidelines as to when and how they should be applied, particularly when the person in question requires long-term follow-up. Alcimed's recommendations include the use of information sharing tools by the various healthcare professionals taking part in domiciliary care and finding sustainable backing for R&D programs through private-state partnerships.

(1) The French federation of respiratory failure patients or Fédération Française des Insuffisants Respiratoires, Western Paris France Alzheimer and the anti-cancer league or Ligue Contre le Cancer.

Going paperless: the French Medical Association issues practical recommendations

Subsequent to its first two White Papers (Computerizing medicine and Telemedicine), the French Medical Association (Conseil National de l'Ordre des Médecins) has published a new paper entitled "Digitalization of medical documents: creating trust to promote a paperless healthcare system". From medical record contents, access to records and digitalized archives to electronic exchanges, the paper analyzes a broad variety of issues from an ethical and legal standpoint and provides a set of practical recommendations intended to support the development of digitalized medical practice.

The "Living at Home" initiative

"Living at Home" was set up in mid February by France's Secretary of State for the Elderly, Nora Berra, and is headed by Professor Alain Franco. The aim is to come up with in-home support measures for the elderly. The initiative is divided into six headings, each led by a well-known figure in the field:

- Diagnosis of conditions for independent living (Bertrand Delcambre, Centre Scientifique et Technique du Bâtiment)
- Independent living support technology and services (Maryvonne Lyazid, Fondation Caisse d'épargne pour la solidarité),
- Mobility and city planning (Jean-Pierre Aquino, Société Française de Gériatrie et de Gérontologie, French geriatric and gerontology society),
- Professions, abilities and training (Yves Matillon, Professor of clinical epidemiology),
- Social inclusion and prevention of discrimination (Gilles Duthil, Institut Silverlife),
- Optimization of service management (Michèle Debonneuil, national financial inspector).

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