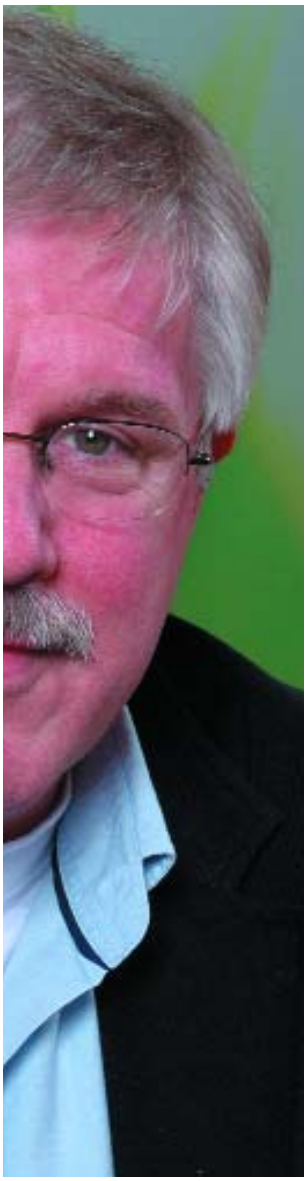
‘A WEB BASED, PATIENT CENTRED, PROTOCOL DRIVEN INTERHOSPITAL COLLABORATION PROJECT FOR WOMEN’S HEALTH USING AN INTERACTIVE INTELLIGENT WEB PORTAL’

EFFICIENT HEALTHCARE ISA AN URGENT NEED.

THE MADONNA PROGRAM
THE PATIENT IN CONTROL

THIS NEED IS ESPECIALLY FOUND WITH THOSE WHO ARE RESPONSIBLE FOR NOT ONLY THE QUALITY OF CARE: THE MEDICAL SPECIALISTS IN UNIVERSITY HOSPITALS AND THE MANY PEOPLE THEY WORK WITH.



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Core tasks of a university hospital

For gynaecologists of the VU medical centre it is becoming increasingly difficult to combine and adequately perform the core tasks of a teaching hospital (direct patient care, medical education and medical-scientific education and research).

Furthermore, those three tasks are competitive in relation with each other: the budget for the hospital is determined based on some parameters, of which the number of new patients is one, which is now increasingly calculated in a Diagnosis Treatment Combination (DTC). But, more new patients also signifies: more trespassing of time, space and staff.

Academic centres should have an open door for an influx of referrals of other hospitals: these patients usually come from outside the direct catchment area, but suffer from symptoms/ diseases that belong to the expertise of the university hospital's medical staff. Oncology for example, has always been such a spearhead. For the VUMC obstetrics and gynaecology department they are amongst others: familiar tumors, menstrual disorders, imaging (ultrasounds), gastrointestinal endoscopy/ minimal invasive surgery, endometriosis, Poly Cystic Ovary Syndrome (PCOS), artificial reproduction, preconception counselling, centre for multiple births, foetal medicine, education with skills lab and high risk obstetrics.

The more hospital referrals, the more opportunity to gain more in-depth expertise in these fields and also do research in these matters. Eventually, part of the staff will have to be paid by the proceeds related to scientific publications.

Medical education however requires specifically and especially a general average of the patient "material", the everyday clinical pictures. This was one of the reasons for an intensive collaboration with peripheral departments, the first being the obstetrics and gynaecology department of the Sint Lucas Andreas hospital in Amsterdam (SLAZ). This strategic medical professional networking between the VUMC and the regional hospitals (teaching hospitals), started in 2002, makes it necessary to install special ICT facilities (high speed networks and adequate applications for the medical practice). The current alliance with the Amsterdam Slotervaart Hospital will speed these activities up.

The core question was: "How can we achieve that the patient arrives there where there is an abundance of expertise for his or her specific disorder? Is it possible by using ICT to save time and space and to get more patients from specific areas of interest without falling into the trap of too small an amount of average educational material"?

Experience with paper records

The well-known disadvantages of paper records are daily routine: information that cannot be found, handwriting that is hard to read, not being available at the right moment at the right time and especially the fact that for examination all records have to be gathered. This brings inconvenience and frustration, not only for the physician but also for the patient.
Many patient data are maintained by hand in a (paper) record, meaning that the information is in fact "lost" once the record has been stored. The care practitioner who comes next has to write down everything again starting from scratch. A specialist cannot efficiently use the data the GP gathered because there is hardly any electronic communication between primary and secondary health care.
Some vendors of electronic patient records pretend to have solved these problems. Unfortunately, in many cases, it turns out that information from the primary process can hardly be exchanged between specialisms, let alone between hospitals. Under the veil of "communication" new islands are created.
The second core question was: "How can we improve the quality of care and of the administration in such a way that the patient's data are always available, whenever and wherever, not only for the care provider but in particular for the patient himself"?

Reversal of the chain care

The aim of the Madonna program is, with great openness to the healthcare sector as a whole, to carry out a system change for the whole chain starting with the patient, the primary sector (GPs and midwives) and then the gynaecology departments of the collaborating hospitals (VUMC and SLAZ). At the end of the day this system will have to be apt to be taken over by other specialisms and other hospitals.
The core of the project is rebuilding the chain of care into a coherent whole that has already started up long before the patient has presented himself at the hospital's reception. As soon as the client experiences complaints or symptoms there should be uniformity in the available information whether it is coming from the GP, company doctor or elsewhere (for example a web site). It will be possible to immediately enter information in such a way that it remains available during the entire path the patient follows through healthcare.
In case of a (follow-up) therapy by possible future care providers elsewhere it must be possible to continue the care "seamlessly".

The necessary electronic equipment and the required organisation together form a patient logistics system. We expect that application of in such a way modernised patient logistics will provide great qualitative and financial advantages in relation with care 'as usual'.

The patient is supposed to play an active part: after consulting her GP and/ or information on the web site she can easily find where to go best and make an appointment.

Madonna, mother and child; today's woman

Madonna is the symbol for "mother and child", but also for "today's woman". The Madonna care innovation initiative was born on the shop floor and indeed mainly out of displeasure of gynaecologists and their patients about the current diagnostic and therapeutic procedures in the care chain. The gynaecologists of the VUMC took the initiative to implement chain care. The management boards of both hospitals were enthusiastic about the Madonna program and gave it priority.

Madonna is based on an intelligent interactive front office (Madonna portal), linked to various back offices and has the following characteristics:

- The patient is centre staged (demand driven

care, chain care reversed);
- Optimal care within a regional network of hospitals (interhospital Diagnosis Treatment Protocol (DTP) and Electronic Patient Record;
- Care linked to existing treatment protocols ('evidence based healthcare').

The Madonna program leads to amongst other things shorter waiting lists, shorter treatment paths, reduction of costs in healthcare and faster return of employees to their employment. This was confirmed by a simulation study, performed by the TU Delft, from which resulted that the Madonna program may lead to a reduction of the number of repeat visits of approximately three per patient to an average of 0.3 per patient.

Based on various pre-studies a concept for integrated regional care was developed of which a number of elements (such as special issue outpatient's clinics) have now been partly implemented. In the Madonna program the (ICT-) service concept is going to be refined and carried out and patient logistics will be streamlined. Furthermore, by using ICT in an innovative way, we intend to work towards the establishment of one virtual counter, in the shape of an interactive "intelligent" web portal that provides access to healthcare in Amsterdam West.

Through this web portal, the client (citizen/ patient, and professionals such as GP and midwife) can get help for all questions, triage and referrals in the field of gynaecology and obstetrics. The intake too can take place via the intelligent portal, where, by filling out a digital interactive questionnaire the client can make an appointment with the appropriate (special issue) outpatient's clinic. This way the patient gets the best care possible at the most appropriate location inside the conglomerate of cooperating regional hospitals.
By online filling out the anamnestic information, medical case history, etc. the patient also contributes to building her electronic patient record (EPR). In this EPR the patient's information only needs to be stored once in an unequivocal way. All medical professionals involved and the patient can view these data at all times, no matter what the time is or the location.

Partners

Of course it is not possible to carry out such a program without collaborating with others. So far, (apart from the management boards of VUMC and SLAZ) the following institutions have formally reacted in a positive way at the request to participate: AGIS Health Insurance, EDZA (Electronic Health Record Amsterdam), NICTIZ (National IT Institute for Healthcare in the Netherlands), NPCF (the Federation of Patients and Consumer Organisations in the Netherlands), Microsoft, Siemens Netherlands Plc and TU Delft (Faculty of Technology, Policy and Management).

On elaborating the Madonna program, partly still to develop international standards will be used. The program will be linked with the NICTIZ ICT infrastructure. The infrastructure for Madonna will be designed in such a way that it can be used very well in case of scale-up to other hospitals and regional primary care.

Point of departure is that cost reductions to be achieved can serve to cover the investments that have to be done for ICT. This could be the basis of a new and healthy financing model for chain care with ICT.

The experiences with the Madonna program will be shared to a maximum and can offer third parties (care providers and management) perspective for acceptance and implementation of these service models in their own (care) environment. This way Madonna will contribute to a speedy introduction of ICT services in other obstetric/ gynaecologist cooperatives and after that in other medical disciplines. They will be able to use the financing model that was developed in the program, the standards elaborated (ICT and logistics) and experiences of users (both care professionals and consumers). Solid examples make the improvements in the process transparent. When knowledge and experience, both substantively and with the corresponding business model, become available, it will contribute to accepting such models by decision-makers and users. Transfer of knowledge will take place through conferences, publications and various umbrella and medical professionals' organisations. □