Towards the sustainability of the Health Care System: Telediagnosis as a success case.

Jose Miguel Cacho[1] and Natalia Jimenez-Lozano[1]

[1] BULL España, Paseo de las Doce Estrellas 2,
28042 Madrid (Spain)
{Jose-miguel.cacho, Natalia.Jimenez}@bull.es

1 Introduction

The breakthroughs in Communication and Information Technologies (ICT) have empowered Telemedicine as a way to provide remote medical assistance.

The benefits from the implementation of ICT in the health care sector are clear: to make better use of available health resources, cost savings and bring close the healthcare to remote or inaccessible areas. Specifically, the optimization in the management of medical professionals is pivotal to limit expenditure without jeopardizing the quality and efficiency of the services.

2 Why telediagnosis is needed?

The development of diagnostic systems is essential in Medical Centres with manpower restrictions. Telediagnosis reduces derivations to specialized health care shortening the waiting list; allows timely diagnosis and treatment and provides primarily health care services in remote areas avoiding thus unnecessary displacement with the consequent saving for the patient. Moreover, telediagnosis overcomes geographic barriers providing specialized health care services to places and situations where they are lacking.

3 Dercam: a solution for dermatology telediagnosis

It is possible to set out telediagnostic solutions for any kind of pathology in which diagnosis, images or multimedia files are involved. This is the case of teleradiology, teleophthalmology, teleulcer, teleictus, etc. BULL has developed an intuitive and friendly system called Dercam that allows the remote diagnosis and management of dermatology pathologies through photo camera pictures. Dercam is a Castilla-La Mancha regional program that manages all patient's information since she/he goes to the primarily care appointment until the discharge by the specialist.

The system is based on asynchronous communication between the primary care centers and the specialist. The clinical picture is stored in the PACS (Picture Archiving & Communication System) and the patient information is integrated with the EMR (Electronic Medical Record), HIS (Hospital Information System) and PCS (Primary Care System).

Dercam has been deployed on J2EE and it runs on Oracle, JBoss, iaS and Tomcat servers on an Oracle Data Base. The integration among systems uses the standard protocols HL7, DICOM and Web Services.

The project started in 2010 and, since then more than 40,000 patients have been users of this system in primarily and in specialized care. The results highlight the effectiveness of the system because it avoids derivation of a 54% of the patients seen in primarily care. These good results are due to the accuracy of the diagnosis and the high percentage of cases that are treated in specialized and primarily health care respectively.

References

1. Dercam:
   (http://sescam.jccm.es/web1/home.do?main=/ciudadanos/avancesMedTecn/dercam.html)

Acknowledgements