

Experience of CNR Institute of Clinical Physiology for angiographic images and data consultation in Tuscany health wide area network through WEB applications.

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In the CNR Institute of Clinical Physiology the invasive cardiology laboratory activity is handled by a huge data-base that allows the tracing of all the process from patients waiting list to the procedure protocol, medical reports, image archiving, administrative procedures. A selection of this data set is transferred to the integrated clinical database of the Institute (ARCA). This database receives informations from clinical ward and all laboratories of the Institute. During the last two years we have tested the possibility to public all these informations on a web page attainable by an intranet. In this period we have tried successfully the use of a security transport layer to hide the transaction of clinical data and respect the privacy of patients. After this, we extended the consultation to external users through wide area network. These users are the referring clinicians of cardiology departments that address patients to our catheterization laboratory. External users may consult clinical report of invasive procedure and visualize significative angiographic images with an Internet browser. The data are stored on a system that limits and selects the accesses. During the consultation session, the data are delivered on public channels (Internet) through HTTPS (SSL) protocol that, using cryptography, guarantees the confidentiality of the sensitive data when travel from the server to the client. Moreover the protocol allows the authentication of both the data supplier (the server) and the user, verifying the authorization to the access, by means digital certificates and smartcards. The applications allow the consultation only for user's patients that give a formal consent for personal data transaction. This experience has improved the quality of communication between clinicians expanding the agreement in decision making in invasive cardiology.