

Second Opinion Consultation Takes Place Online Using WebEx

Industry

Public Administration - Healthcare

WebEx Applications

WebEx Meeting Center

Summary

WebEx also confirms its position as a winning choice in a hospital environment and allows the quality of services provided by Public Health to be enhanced, by improving collaboration between doctors and specialists.

Headquarters

Reggio Emilia, Emilia-Romagna, Italy

Number of Employees

2,800

WebEx Customer

Since 2007

Highlights

- Thanks to WebEx, the doctors of the Neuroradiology department may ask for advice and second opinions from specialists via the Internet
- WebEx allows for sharing of PACS files and maximum interactivity over materials during consultation
- The Hospital has achieved huge benefits through the reduction of meetings between specialists and travel times, with an improvement in the final quality of service provided
- WebEx has also had an indirect impact on the sound care of the patient, inasmuch as it allows for rapid sharing of information, know-how and experience, in addition to sharing sensitive data with a high level of security
- The use of WebEx has been tested in Neuroradiology and will be extended to other departments, providing large-scale savings and increasing the overall efficiency of the services provided by Public Healthcare

The Santa Maria Nuova Hospital is the main healthcare facility in Reggio Emilia province. It is a hospital centre equipped with 900 beds designed to receive an annual average of 50,000 patients. The number of average A&E (Accident & Emergency) admissions of around 76,000 per year further reinforces its position as a medium to high capacity facility within Italy's healthcare system. The Santa Maria Nuova Hospital has 2,800 employees. It is part of a provincial network of hospital facilities comprising the hospitals of Guastalla, Correggio, Scandiano, Montecchio and Castelnuovo nei Monti, where around 1,000 doctors work within a total catchment area with around 500,000 local residents.

Mr Mauro Barani works in the Hospital's Information Technology and Telematics Department (directed by Mr Sergio Bronzoni) and has coordinated the WebEx implementation project at the hospital in Reggio Emilia. He has been working alongside Mr Andrea Nitrosi who is employed by the Santa Maria Nuova Hospital's Medical Physics Department. It is through WebEx itself that we have collected the information and observed its practical use live within the Santa Maria Nuova hospital environment. It offers an example of how an effective vehicle for collaboration between doctors and specialists is able to allow consultation and second opinions to be provided in real time and has therefore turned into a real success story.

The Challenge

The hospital facilities which belong to the Santa Maria Nuova are equipped with a Computer Tomography and Magnetic Resonance system. The images produced by these tools are stored and made accessible on centralised image diagnosis systems known as PACS (Picture Archiving and Communication Systems). "Over the last few years, the hospital has improved the network connecting the provincial hospitals", notes Barani "moving from a 2Mb CDN to a fiber optic one. This has allowed for the development of innovative projects to boost productivity and benefit our patients". The first step was the development of a teleradiology system to provide neuroradiologists with a remote consulting tool and allow them to obtain a second opinion during emergency situations. This enables them to be connected to the PACS system through a remote workstation (for example from their home). "By virtue of this implementation, there was a requirement to test an IT tool to allow the sharing of a document, a diagnostic image or possibly even the neuroradiologist's PC desktop. The aim was to submit the materials being viewed to colleagues and specialists, especially in cases of particular clinical interest, while at the same time achieving a good image resolution". In short, a tool was required to perform teledidactic and e-learning activities as well as to facilitate second opinions — and to do so in a flexible, high-performance and easy-to-manage manner, both from the end user and IT administrator perspectives.

The interactive aspect of consultation performed via the Internet and remotely is critical. And in the case of complex examinations such as neuroradiological ones, there is a high number and sequence of images at stake (even to the order of several hundred). A high-performance network and a solution like Cisco WebEx can make all the difference in such cases, as Nitrosi clarifies: "It is very important to have flexible tools which are able to manage the materials used and allow image details to be identified remotely. This makes it possible to show colleagues a potential problem or the exact point of

an image requiring more in-depth examination, going well beyond simple sharing. The PACS system lacked a more cutting-edge tool capable of providing interactivity, for example pointing the cursor or leaving control over one's own mouse with the most expert colleague, in order to allow him or her to highlight a detail and thereby supply a second opinion or a significant viewpoint".

The Solution

In response to the requirements which the medical staff provided, the Hospital's Information Technology and Telematics Department tested the use of Cisco WebEx, after an initial comparison with other collaboration tools which helped highlight its effectiveness. As Barani clarifies: "Even the PACS has an internal chat system but it is not advanced enough to allow sharing of one's desktop. The functionality which makes it possible to leave control over one's own mouse to another doctor facilitates excellent levels of collaboration". Nitrosi fully shares this viewpoint. "Other systems show limits in their teledidactic capability and in the consultation of images, with a significant loss of quality. WebEx has on the other hand maintained quality well considering that it is a web-based system".

While it was being used, doctors observed how easy it was to share the materials viewed and to add notes and comments in real time. "One of the strengths of WebEx", adds Nitrosi, "is the fact that if I highlight a detail on the image and another colleague of mine wants to point out another detail to me on the same image, it only takes one click to open the tool for providing notes to the other colleague. WebEx therefore achieves much more than merely projecting the image to a group, as it provides us with a high level of interactivity while being remarkably easy to use".

WebEx has therefore demonstrated its efficiency in putting specialists in touch with each other. In the case of Santa Maria Nuova, the hospitals are located within a radius of 50km but they could in fact be anywhere. Indeed, only an internet connection is needed to take advantage of its collaborative power and the ability to communicate data and information in a protected and encrypted format.

"Thanks to WebEx and with minimal investment, we are able to use a tool that is at the cutting edge technologically and to improve the quality of service provided to our patients, even if this occurs indirectly".

Mauro Barani, information technology and telematics department, Santa Maria Nuova Hospital

The Benefits

The benefits which are starting to be obtained include a reduction in face-to-face meetings between specialists along with an improvement in the final quality of the service provided by using WebEx, as well as a reduction in travel times. The basic configuration of the system is described by Barani: "We have been supplied with 4 WebEx Meeting Center licences with administration rights, which make it possible to promote the use of web conferencing with 25 participants at the same time, taking advantage of voice and video transmissions via VoIP. This is all included in a single system which allows us to make large-scale savings when - as is already occurring - other Hospital departments ask us to share the benefits of WebEx with them".

The fact that WebEx is a Software-as-a-Service (SaaS) solution eliminates the internal management costs incurred by the Hospital, both in terms of dedicated devices and maintenance from technical staff. It also hugely simplifies the job of the network administrators, who can devote their time to more important activities. "WebEx is an SaaS service, which is definitely an

advantage”, Barani reiterates. “Having a service of this type internally with dedicated servers and software would therefore entail fairly significant management costs”. Thanks to WebEx, the technology component is fully outsourced which provides further benefits in terms of data confidentiality. “The information conveyed on WebEx is fully encrypted. The sensitive data processed during web meetings is not stored on any server (unlike any other on-site solution) but is instead sent to recipients using secure and encrypted methods”.

All the benefits linked to the greater productivity and collaboration between the hospital’s medical staff are therefore reflected in an improvement in the services provided. WebEx is a tool which has an indirect impact on the sound care of the patient in that it allows the sharing of data, know-how and experience. “The benefit the patient gets from it is through the fact that the specialist looking after him or her is able to consult with colleagues more easily and faster”, adds Nitrosi, who also stresses how investing in innovation in an ICT context provides benefits for a public health organisation both financially and in terms of time savings. “WebEx can be used at various levels of the Hospital, inasmuch as it doesn’t require the use of dedicated devices. In order to maximise savings it is important to focus investments, which in this case are minimal, on technologies which make use of the Internet”.

The Future

The IT staff of Santa Maria Nuova have noted how the use of WebEx by neuroradiologists has stimulated the interest of other departments, such as the Geriatric department. The feedback generated by the experience put to the test during the web discussions for consultation and second opinions has been positive: “We will support departments which request for this tool”, concludes Barani, “The experience in Neuroradiology has not only been pioneering but has also provided a case study. With minimal investment, we are able to use a tool that is at the cutting edge technologically and to improve the quality of service provided to our patients, even if this occurs indirectly”.



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