

King Faisal Specialist Hospital & Research Centre – Maintaining Technological Edge through Visual Communication



King Faisal Specialist Hospital and Research Centre (KFSHRC) has had three fundamental roles since its establishment in 1975:

- To provide universal and highly specialised healthcare services
- To teach and distribute medical expertise throughout the country and eventually in the Middle East region
- To conduct medical research and development.

KFSHRC aims to be at the forefront of the healthcare industry in Saudi Arabia and to achieve such high quality of its services that it can rightly claim to be amongst the best healthcare institutions in the world. KFSHRC has adopted technology early to ensure that it was able to fulfil its three main roles. It began its Telemedicine and eHealth Initiatives, where the element of visual communication using video conferencing is a key technology enabler, to overcome some of the unusual characteristics of the medical industry in Saudi Arabia. The country has one of the world's highest population growth rates, a sparsely but unequal distribution of population and an improving healthcare sector. The secondary effects of leveraging such technology have been an immediate cost reduction in the provision of healthcare services and an immediate reduction in travel.

Video Conferencing Facilitates the Provision of Healthcare Services



KFSHRC's Telemedicine Network and eHealth applications utilise an integrated IT and communication infrastructure to provide healthcare services within Saudi Arabia. Operating on a hub-and-spoke concept, there are currently twenty remote medical sites linked to KFSHRC, which in turn is connected to foreign medical institutions in the United States and regional and international health organisations such as the EMRO and WHO. It is this connectivity, enriched by a visual element, which allows KFSHRC to effectively meet its provision of universal healthcare services obligation.

Given that only thirty-six percent of the population resides in the three biggest cities of Riyadh, Jeddah and Mecca, there is a need to ensure that healthcare services also reach patients widely dispersed throughout the country.

One example is KFSHRC's introduction of Tele-ICU services with King Khaled Hospital located in Ha'il, a region with less than 5% of the population. Using the Telemedicine and eHealth Network KFSHRC's medical staff is able to administer medical care to the patients in intensive care units (ICU) in King Khaled Hospital. The immediate benefit of leveraging telemedicine has been the extension of KFSHRC's patient catchment areas, allowing a degree of centralisation of medical expertise to avoid the potential high cost of maintaining the same level of medical staff in every hospital located in Saudi Arabia. There is also an indirect benefit from utilising video conferencing to administer medical care – finite bed capacity can be better utilised as not all acute ICU cases have to be referred to KFSHRC's facilities. As a result of the Tele-ICU introduction as of June 2008, King Khaled Hospital has administered consultations to sixty ICU patients, shared diagnosis and delivery of care with KFSHRC's expertise, and provided reassurance to patients in Ha'il.

Video Conferencing Helps Build Medical Excellence



For KFSHRC to provide quality and specialised medical and healthcare services, it must build a pool of expertise. It has been a challenge in the past to rapidly achieve a pool of competent healthcare service staff in Saudi Arabia. As such, KFSHRC relies on the Telemedicine and eHealth network to disseminate medical experiences in tertiary healthcare from big cities to remote medical centres within the country. These educational programmes are recorded in real-time and transmitted both in real-time and on-demand via the Telemedicine/IT communications network. Highly complicated

surgical procedures such as organ transplants are recorded and broadcast immediately for real-time observation by students located outside of Riyadh. This is part of KFSHRC's Medical Education Programmes, where medical students are able to earn academic credits towards their graduation requirements. This educational programme also draws upon expertise and experiences in overseas medical institutions such as the Mayo Clinic schools, where video conferencing is used to raise the standard and quality of the local medical specialists.

Similarly, the use of video conferencing facilities between KFSHRC and foreign medical expertise allows local healthcare service providers to tap into their experience. For example, KFSHRC also provides medical second opinions with referral regional hospitals and international medical institutions in the United States.

KFSHRC's medical excellence is also determined by the overall support staff such as medical technicians, administrative and logistics staff. The element of visual communication has allowed KFSHRC to firstly overcome a medical skills shortage by ensuring a dedicated real-time access to technical and medical expertise not located within its staff and secondly to enable easier recruitment activities. Video conferencing is usually used at the first instance to conduct interviews with potential candidates, as a way to ensure a smoother recruitment process.

Video Conferencing Strengthens KFSHRC's Prestige

KFSHRC has developed a reputation for excellence both as a healthcare provider and as a training institution, and the availability of state-of-the-arts video conferencing facilities has played an important role in building up that reputation.

The prestige and respect associated with being the market leader in advanced healthcare and the patients' first choice for quality services helps the hospital to attract and retain medical staff. This in turn is critical to the delivery of high quality and affordable healthcare services.

Over time, KFSHRC has been able to develop a local pool of medical expertise in such advanced medical fields as cardiovascular diseases, oncology, paediatric haematology and oncology, radiology, neurosciences, pathology and laboratory medicine, obstetrics and gynaecology, internal medicine, urology, surgery, liver transplant, kidney transplant, anaesthesiology, emergency medicine and orthopaedic surgery. This would not have been possible without video conferencing.

Indirect Benefits – Cost Savings and Reduction in Travel Hassle

Leveraging the hub-and-spoke approach to healthcare provision has yielded significant cost savings for KFSHRC, which indirectly enable KFSHRC to channel its expenditure towards achieving its mission for healthcare excellence. Cost savings stem from not having to provide a full team of medical staff at a uniform level across all hospitals in the country which is sparsely and highly unequally distributed. There are also cost savings in terms of the reduction in overseas trips to gain access to foreign medical expertise, whether it be for delivering medical services or for training purposes. More importantly, video conferencing has extended the healthcare provision environment beyond the physical space in KFSHRC, thereby facilitating a more clever use of the finite bed capacity within KFSHRC.

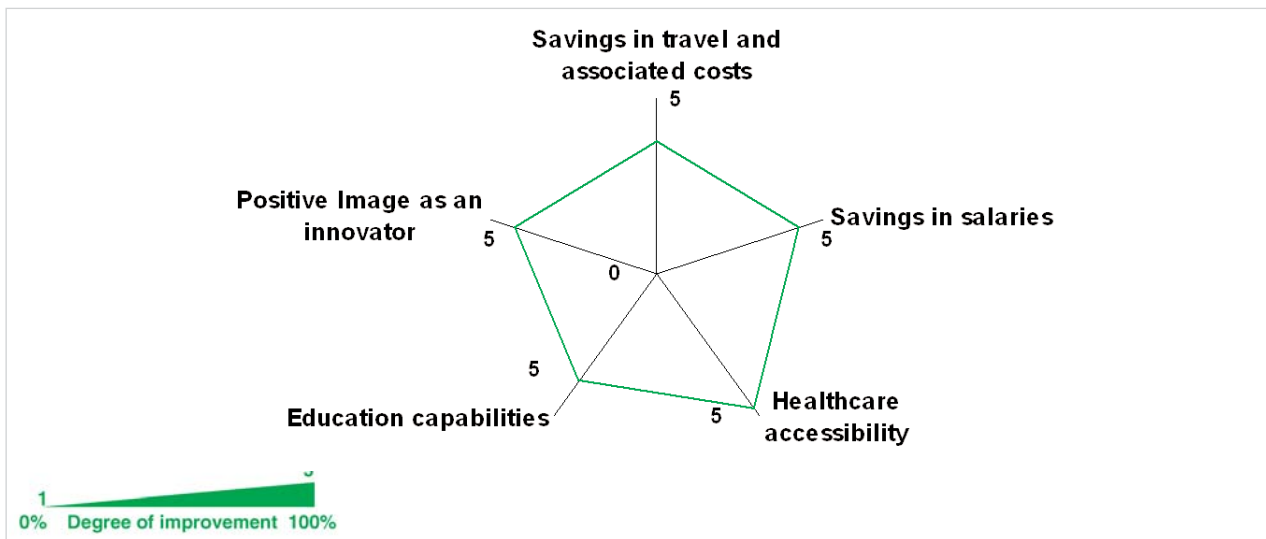
Another benefit of video conferencing has been a reduction in overseas travel. Local medical staff have experienced improvements in their quality of life, as they have been able to cut back on the many overseas trips - particularly to the United States – that used to be necessary for training. As immigration rules have become tighter, travelling overseas has become a significant inconvenience, and the hospital actively discourages all but the most necessary overseas trips. The ease with which medical staff can seek a second opinion or exchange ideas with colleagues abroad through visual communication has been one of the main benefits of implementing video conferencing.

“My life is significantly improved now that I no longer have to subject myself to the airport security measures when I travel to the States. Now, I can easily have a conversation with my counterparts in the States through only a few clicks. It is so much easier now.”

KFSHRC Healthcare Professional

Video conferencing benefits at a glance

The spider diagram summarises the importance of the business benefits of using video conferencing for King Faisal Specialist Hospital & Research Centre. The scale of 1 to 5 reflects the degree of improvement that it has observed as a result of using video conferencing facilities. For example, King Faisal Specialist Hospital & Research Centre has observed that video conferencing enabled it to fulfil its three fundamental roles to become the leading centre of medical excellence.



Source: King Faisal Specialist Hospital & Research Centre

Key Business Benefits at a Glance

The use of video conferencing facilities has helped KFSHRC achieve the success it enjoys as one of the most respected and prestigious healthcare providers in the Middle East region.

The most important benefits have been:

- Ensuring the provision of specialist healthcare services to all areas of Saudi Arabia in a cost effective manner
- Building and maintaining medical excellence throughout Saudi Arabia through video-enabled training programmes
- Retaining the highest calibre healthcare professionals by providing state-of-the-arts facilities
- Alleviating travel and immigration related stress by reducing the number of overseas trips required of leading members of staff