

# Telemedicine: How Apple and others may keep the doctor away

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November 2014

With companies such as Apple and Samsung moving into the health data business, a significant shift in how the health industry interacts with patients using telemedicine is being predicted.

It is timely that the Health Authority – Abu Dhabi has recently introduced regulations to define minimum standards for telemedicine as a means to provide healthcare services to patients in the Emirate of Abu Dhabi.

## **What is Telemedicine?**

The term “Telemedicine” generally refers to the use of information and communications technology to transfer medical information from one site to another to improve a patient’s clinical health status.

Remote diagnosis and consultation through the application of telecommunications is not a new phenomenon. For example, back in the 1930s pioneers living in remote areas of Australia used two-way radios to communicate with the Royal Flying Doctor Service.

However advances in technology together with the growing availability of broadband on ultra fast fiber and 4G mobile networks means that right now telemedicine is rapidly evolving to cover a variety of applications using voice, video or image data.

Patient consultations via video conferencing, transmission of medical images, remote patient monitoring, e-health patient portals and continuing medical education are all now part of telemedicine.

Although most medical specialities lend themselves, at least in part, to having evaluations performed using telemedicine, specialities that require less direct patient contact, such radiology or pathology, have to date tended to be the best candidates for telemedicine.

Now mobile telemedicine is poised for significant innovation. While there are already many consumer focused telemedicine apps available, with big brands like Apple and Samsung making significant pushes into the area, telemedicine could soon become a mainstream proposition.

Apple recently unveiled its new Health app for health and fitness data and a cloud-based information platform known as “HealthKit” that can integrate data from across different providers and which is open to developers. HealthKit has been included by Apple in iOS8 the iPhone’s new operating system that has just been released in conjunction with the iPhone 6.

Apple has also announced “partnerships” with a number of large healthcare institutions for developing consumer facing healthcare apps. These partners include Epic Systems, one of the largest suppliers of electronic medical record systems in the United States.

Samsung has unveiled a new hardware reference design called Simband for developers building devices or applications that leverage data captured through wrist-worn sensors (either Samsung’s or other manufacturers). The Simband connects to Samsung’s new, open source SAMI platform, which uses a mix of hardware and a cloud backend for sensor data. Samsung hopes its new

software platform will bring together data from various sources to provide more helpful health data analysis

## **Benefits**

The principle benefits of telemedicine include:

- Improved access – Telemedicine allows patients living in remote areas to receive clinical care from doctors or specialists at a distance. Similarly, it allows the specialists and health facilities to expand their reach beyond their physical premises.
- Convenience – Rather than have to visit a doctor's surgery for a consult, patients can do so from the comfort of their own home without exposing them to other sickly patients. This reduces travel time and stress for the patient and possible transmission of infectious illnesses.
- Cost Efficiencies – Telemedicine can reduce the cost of healthcare and increase efficiency by better management of chronic diseases, sharing of professional staffing, reduced travel and fewer or shorter hospital stays.

By contrast, one of the main disadvantages with telemedicine is the perceived risk that personal health information may be compromised by transmission and offsite storage.

Regulators around the world have sought to set standards that balance enhancing the portability of personal health information for the better integration of health services, while at the same time improving accountability to protect the confidentiality of that shared information.

For example, in the US the Health Insurance Portability and Accountability Act 1996 sets out privacy and security standards for the use and distribution of health care information. The privacy rules regulate the use and disclosure of personal health information, while the security rules impose administrative, physical and technical security safeguards for electronic personal health information.

## **HAAD Telemedicine Regulations for the Emirate of Abu Dhabi**

Consistent with the Abu Dhabi Economic Vision 2030 to develop a robust, world-class healthcare sector in the Emirate, in recent months the Health Authority – Abu Dhabi (“HAAD”) has introduced regulations to define minimum standards for telemedicine as a means to provide healthcare services to patients in the Emirate of Abu Dhabi.

The HAAD Service Standards for Tele-counseling in the Emirate of Abu Dhabi, which came into effect on 25 November 2013 (“Tele-counseling Standard”), defines minimum standards for the use of tele-counseling and aims ensure the integrity of physician – to – physician counseling conducted via telemedicine interfaces.

The HAAD Standards for Tele-consultation in the Emirate of Abu Dhabi, which came into effect on 20 March 2013 (“Tele-consultation Standard”), defines minimum standards for the use of tele-consultation and aims to ensure the quality and safety of physician – to – patient telemedicine services.

Important features of the Tele-consultation Standard are, amongst other things:

- It defines the services that may be offered through tele-consultation services. Invasive clinical interventions are excluded.
- Outlines the principles of patient consent that have to be upheld.
- Requires that healthcare facilities wishing to provide tele-consultation services must be a HAAD licensed healthcare facility specifically licensed to provide tele-consultation or an existing HAAD licensed facility that is authorized by HAAD to provide tele-consultation.

- HAAD regulates healthcare professional's use of tele-consultation under the existing professionals licensing requirements (i.e. no tele-medicine licence will be required or issued for healthcare professionals wishing to provide tele-consultation services).

### **Key features of the Tele-counseling Standard are:**

- It is the responsibility of the originating HAAD licensed healthcare facility/provider/professional to ensure that tele-counseling services are only sought from providers authorised by HAAD (where the provider is located in Abu Dhabi) or licensed by the relevant country regulator where the professionals/providers are located outside of Abu Dhabi. The primary responsibility for the clinical and medical healthcare with the HAAD licensed local facility, where the local facility raises the tele-counseling request.
- The local facility that uses tele-counseling must have policies and procedures that govern the use of tele-counseling.
- It outlines the requirements for the arrangements (i.e. written agreements, memoranda of understanding and contracts) between HAAD licensed healthcare providers and tele-counseling service providers.
- Under each of the Tele-counseling Standard and the Tele-consultation Standard the HAAD licensed healthcare professionals and providers using telemedicine to provide services have the broad duty to develop and implement clinical and quality governance systems to protect the privacy concerns of the patient and the confidentiality and security of their medical information and records at the relevant healthcare provider's site and during transmission. In particular, confidentiality, privacy and security of health data and records must comply with the requirements prescribed by the following other HAAD regulations:
  1. The data management policy in the HAAD Healthcare Regulator Policy Manual;
  2. HAAD Medical Record/Health Information Retention and Disposal Policy; and
  3. The HAAD Data Standards.

Under the Tele-counseling Standard and the Tele-consultation Standard the healthcare facilities and the healthcare providers respectively have to ensure that the telemedicine services meet certain technical standards, including:

- The equipment and devices is appropriate to support the telemedicine services.
- The equipment and devices are compatible with that of the distant site used to access the telemedicine services.
- Having appropriate systems in place to ensure sufficient availability of the network for critical connectivity.

### **Teleradiology Services in Dubai**

Since 2012 the Dubai Health Authority ("DHA") has regulated the use of the specific telemedicine service of "teleradiology" in Dubai under the DHA Diagnostic Imaging Services Regulation. "Teleradiology" is defined in the DHA regulation as the transmission of diagnostic images and related data from one location to another for the purposes of interpretation or consultation.

Amongst other things, the DHA's teleradiology standards have express requirements as to the personnel at the transmitting site and the receiving site. The transmitting site should comprise of at least one full time radiologist, one radiographer and a system manager with informatics certification, whereas the receiving site should employ a radiologist licensed in the country the service is provided.

### **Need help?**

Telemedicine is emerging as a significant service delivery mechanism for healthcare in the 21st

century. Telemedicine's growing potential also raises a number of legal, clinical and technical questions for regulators. HAAD has recently responded by setting minimum standards for telemedicine as a means to provide healthcare services to patients in the Emirate of Abu Dhabi. The DHA has regulated the use of the specific telemedicine service of teleradiology in Dubai since 2012.