A Study on the U-health Policy to Promote Medical Tourism Industry

Ki-Min Song, Ho-Young Choi* and Seung-Il Moon

Hanyang University Institute of Aging Society, Seoul. Korea
Health Insurance Review & Assessment Service, Seoul. Korea
Hanyang University Hospitality Academy, Seoul, Korea

*haieung@hanyang.ac.kr, moolgatti@hiramail.net (*Corresponding author), moonsi921@hanyang.ac.kr*

Abstract

This study aims to understand and analyse the legal status of telemedicine's standards and category, to bring up problems concerning the analysis findings, and to propose desirable legal measures. By considering the plain meaning of "support" in the Article 34 in Medical Act, responsibility limits of the telemedicine is surveyed. Permitted limits of telemedicine practices, responsibility in case of medical accident at a remote location is studied in this paper. Classification of telemedicine practices including remote doctor and local doctor, proposal for the liability, and necessary for the compensation of responsibility rule in the present Medical Act are also suggested.

Key words: *U-Health Policy, Medical Tourism Industry, Remote Medical Services, Remote Medical Consultations, Remote Medical Services within the Bounds of the Law and Its Responsibilities, Medical Act*

1. Introduction

In Korea, laws which cover remote medical services or U-Health include Medical Act, Health Care Service Act, and Personal Health Information Protection Act. Obstacles to successful remote medical service development are 1) perception that remote medical programs cost too much to run, 2) undeveloped infrastructure, 3) legal issues concerning patient confidentiality in many developed countries [1]. Remote medical service control in the European countries concentrates on information protection, patient confidentiality and agreement [2]. As the need for comprehensive medical services, which concern quality of life by prevention and health promotion as well as the usual medical treatment increases, the laws on remote medical services or U-Health are complementary. Enactment and application, however, is not consistent that it hinders the proliferation of U-Health system[3]. Improvement in the juridical bounds of remote medical services and responsibility rule of medical accident at the remote medical services are required.

Remote medical services are defined as the application of information and communication technology at the request of the medical service [4]. Present Medical Act permits only medical information exchanges between medical personnel. Remote medical services between patient and medical personnel are not allowed. Furthermore, facilities and equipments should fulfill the requirements, and remote medical services outside the medical institution are not permitted. On the other hand, in the United States where remote medical services are allowed, specific qualifications for remote medical services and restrict ranges such as second-visit consultation, or continuous treatment for chronic disease are required[5].

And the Article 34 in Medical Act prescribes the responsibility of the remote medical service providers in case of the remote medical malpractice. If the medical personnel, who performed remote medical services with remote doctor, were a medical doctor, dentist or doctor of oriental medicine, regardless of the 3rd clause, the local doctor takes the responsibility on the patient, unless he or she has clear evidence of malpractice of the remote doctor. However, medical institutions take the whole responsibility regarding misdiagnosis, malfunction of medical appliances; and in principle, local doctor take responsibility on the misdiagnosis of the remote doctor; present laws are inconsistent with the promotion of the remote medical services.

Though restricted, so far, there is no specific evidence to show that remote medical consultations increase risk of medical malpractice lawsuit in comparison with the local consultation for the acute heart failure patient [6]. Remote medical services may improve medical accessibility, promote economic growth, and reduce medical costs, but it may be also very expensive and fatal, unless the understanding and regulation of remote medical services system does not change significantly [7]. This study aims to understand and analysis the legal criteria and category of remote medical services, to bring up problems, and to propose corrective measures so as to promote medical tourism industry. It is also significant to survey the scope of the responsibilities of the remote medical services by considering the plain meaning of "support" in the Article 34 in Medical Act.

Classification of remote medical practices including remote doctor and local doctor, proposal for the responsibility criteria, and necessity for the compensation of responsibility rule in the present Medical Act are also suggested.

2. Understanding of Remote Medical Services and U-Health

2.1. Definition of the Remote Medical Services

Remote medical services provide medical services such as diagnosis, consultation, treatment, and education to the patient at remote place using information technology including reciprocal video, audio, and data communication [8]. The first clause of Article 40 in Medical Act defines the remote medical services as follows: remote medical services are "medical practice by medical personnel such as licensed medical doctor, dentist, doctor of oriental medicine support medical knowledge and technology to licensed local medical personnel in distant space, using information communication technology as computer and Tele-communication." This kind of concept covers the remote medical services in the narrow sense using information communication technology to support clinical examination, not that in the broad sense comprehending health education, health policy or Tele-health [9].

2.2. Definition of U-Health

U-Health, an abbreviation for ubiquitous health, is a medical service which provides the patients with disease prevention, diagnosis, treatment, follow-up service anytime and anywhere without visiting to the doctor. With the advancement of modern medical science, the concept of U-Health is extending the range of subjects from traditional medical care and treatment towards pre-diagnosis and prevention, and improvement of medical service quality for sustainable healthy life.

With the integration of IT technology, current medical services are gradually making progress from simple remote medical consultation, via e-Health towards U-Health. U-Health provides user-oriented services rather than medical institution-oriented ones; focuses on prevention rather than disease treatment; emphasizes on wellness rather than disease

management. U-Health provides public medical services which enable disease prevention by pre-diagnosis; organizationally connects patients, hospitality and medical information providers using technology based on bio-signal sensing technology and wire-wireless network technology; and eventually improves the quality of life by checking the health in real time. International Bar Association endeavors to give a definition to various mixed terms such as health information, remote public health, remote public health information, or remote medical services [10]. National Pension Act defines U-Healthcare as the every activity for evaluation of state of health, diagnosis, and treatment for individuals anytime and anywhere, using ubiquitous network environment [11]; and it covers from remote care services of the patients to general health care services.

3. Current Legal Limits of Remote Medical Services

Medical treatment is a medical management of a patient by the medical personnel for the purpose of recovery; the medical personnel and the patients are the primary agency. The first clause of the Article 2 in Medical Act limits the scope of 'medical personnel' as the 'medical doctor, dentist, doctor of oriental medicine, midwife and nurse licensed by the Minister of Health and Welfare.' Also, the first and second clause of Article 3, and the first clause of Article 33 prescribe the definition, classification and establishment of the medical institutions respectively. Considering these related articles, in principle, medical treatment should be performed in the medical institution by the medical personnel. Therefore, current Medical Act allows medical treatment in the medical institution only by the licensed medical personnel. Remote medical services, however, get treated differently from the general ones.

3.1. General Interpretation

Article 34 of the Medical Act defines remote medical treatment and its requirements and responsibilities; the first clause expounds that medical personnel (practicing medical doctor, dentist and doctor of oriental medicine) may conduct remote medical services, which support medical personnel in distant place with medical knowledge or techniques using information communication technology including computer and Tele-communication, regardless of the first clause of the Article 33. Therefore, the plain meaning of the remote medical services is "to provide medical knowledge or techniques from the medical personnel to local counterpart using information communication technology."

But, the scope of the medical personnel in distant place is reduced to medical doctor, dentist and doctor of oriental medicine; and as there is no regulation on the scope of the local medical personnel, it can be interpreted as medical doctor, dentist, doctor of oriental medicine, and midwife and nurse. The scope of remote medical personnel includes medical doctor, dentist and doctor of oriental medicine in distant place; and local medical doctor, dentist, doctor of oriental medicine, midwife and nurse.

As the first clause of Article 34 stipulates the scope of the remote medical services as 'the case when the medical personnel in distant place supports local counterparts with medical knowledge or techniques,' remote medical treatment and prescription by the medical personnel in distant place without local medical personnel is not legally allowed. However, juridical interpretation of the medical knowledge or techniques support would be required; whether 'support' should be interpreted simply as a 'supplementary medical activity such as consultation' or as an 'every active medical activity.'

3.2. Relationship between Remote Medical Service 'Support' and the Responsibility

3.2.1. Support' in an Auxiliary Meaning

Dictionary defines 'support' as 'reinforce to help.' 'Support' does not signify the reinforcing contents or quality, but rather 'auxiliary status' of telemedicine.

3.2.2. Liability Regulations against Principle

Though the first clause of the Article 34 in Medical Act defines that the local doctor is the major agent of the telemedicine practices, and that the remote doctor supports him/her, the third clause of the same article invests them with the same liability. In the end, liability regulations empowers only the 'support' in the first clause, and the clauses contradict.

3.2.3. Additional Punishment on the Local Doctor

According to the fourth clause of the Article 34 in Medical Act, which covers the characteristics of telemedicine and liability sharing, it seems reasonable to give additional punishment to the local care provider (doctor, dentist, oriental medicine doctor) who provides medical services than remote medical professionals(doctor, dentist, oriental medical doctor) who involves remotely telemedicine, when both have the same qualification standard, and if malpractice of the remote doctor is not evident [12]. The same clause also defines the additional punishment to the local care provider that it can be grounds to prove the central role of local care provider, and auxiliary status of remote doctor. Regarding the telemedicine regulations on the third and fourth clause of the same Article, the interpretation of the 'support' in the first clause should be limited.

3.2.4. Summary

According to the first clause of Article 34 in Medical Act, 'support of the medical knowledge or techniques' between the medical personnel in distant place and local counterpart should be interpreted in a restricted and limited sense.

4. Responsibilities of the Remote Medical Accidents

4.1. Extra Responsibility Rule for the Remote Medical Accident

Medical accident is an "unexpected result in which the treatment provided by a health care provider falls below the expected standard," or "unplanned and unwanted event by the concerned medical treatment, during the medical treatment process or after." The plaintiff is usually the patient, the recipient of the medical service at the medical institution, and it may happen anywhere during diagnosis, examination and treatment.

Current Medical Act does not have extra rule for the medical malpractice, but the Civil Code covers each cases according to the principle of default and responsibility for the matter of tort. But the third and fourth clause of Article 34 in Medical Act defines the responsibility of the remote medical treatment.

First of all, the third clause of Article 34 stipulates the responsibility of the medical personnel in distant place, saying that "the remote medical service provider takes the same responsibility with the ordinary medical consultation." But the fourth clause provides escape clause that if the local medical personnel who conducted medical treatment according to the remote medical service provider is a medical doctor, dentist or doctor of oriental medicine, he

or she takes the responsibility on the patient, unless he or she has clear evidence of malpractice of the remote doctor, regardless of the third clause.

4.2. Examination by Type

Telemedicine is divided into two types. One is between remote doctor and local doctor, and the other is between remote doctor and midwife and nurse, who is not doctor.

4.2.1. Doctor-Doctor (First Type)

The first type involves a teleconsultation by a medical specialist at the request of local doctor. It also includes tele-consultation at the first medical examination by a medical specialist who is not at the same location as the local doctor and patient. In this case, telemedicine practitioner will have liability, if he or she committed serious medical negligence, and local practitioner will take responsibility in other cases. And for reference, liability of nurse and midwife is out of the discussion.

4.2.2. Remote Practitioner and Nurse or Midwife (Second Type)

The First type discussed above does not articulate the liability between remote practitioner and local nurse or midwife. However, it is inferred that unlike the local medical practitioner, nurse or midwife does not have liability. In this case, liability in the accident should be distinguished with a commonsense approach to it.

4.2.3. Conclusion on Case Studies

Article 34, which uniformly stipulates the responsibility of the current medical services, should be reconsidered in the context of actualities. The responsibility of the remote medical service provider on the third clause should be limited to the case of emergency or to the case when contract between patient and remote doctor was agreed.

5. Conclusion

Innovations in the computer and information communication technology enable the medical activity between the patients and medical service providers defying geographical boundaries [12]. In the age of information technology, seniors and people with disabilities would be examined by various intelligent devices [13]. Potential of the information technology to expand public health services, to reduce the costs, to improve and modernize public health services is significant. Remote medical services also can be an prospect solution for the medical error[14]. Current remote medical services stipulate their scope to exchange medical information between medical personnel (medical doctor, dentist, doctor of oriental medicine) using information communication technology, and direct remote medical treatments between patient and doctor are not allowed. But as the various remote medical services are test-operated on the spot, legal system support is required.

Principal agents of the remote medical services are judicially interpreted as the medical doctor, dentists, doctor of oriental medicine in distant place and local medical doctor, dentists, doctor of oriental medicine, midwife and nurse. In the current Medical Act, it is not clear whether clauses permitting ‘remote medical services’ take into account the case when the remote doctor supports local nurse and midwife with medical knowledge or techniques, but if so, responsibility rules should be classified in case of such situation.

Taking the plain meaning of ‘support’ and Additional Punishment Law on the local doctor in the fourth clause into the consideration, the scope of the remote medical services permitted

by Article 34 would be interpreted as a 'supplementary medical activity such as consultation' not as an 'every active medical activity.' In other words, responsibility rule of the remote doctor on the third clause and the permissible range contradict each other.

Therefore, the responsibility of the remote doctor in the third clause of Article 34 should be limited to the case, which is placed in the same case with the ordinary medical consultation between patient and remote doctor, such as 'the case of emergency or the case when contract between patient and remote doctor was agreed.'

And for the promotion of the remote medical services, it should be understood as a new medical technology conformed to national health insurance system; its criteria should be presented; its cost should be calculated so as to accept it into the official health insurance system. Consideration on the temporary incentive policy would also be appropriate.

References

[1] WHO Library Cataloguing-in-Publication Data, Telemedicine: opportunities and developments in Member States: report on the second global survey on eHealth 2009(Global Observatory for eHealth Series, 2), World Health Organization, **(2010)**.
[2] European Commission's Information Society and Media Directorate General, Legally eHealth: putting eHealth in its European legal context, March, 2008, http://www.epractice.eu/files/media/media1971.pdf, **(2012)** July 4.
[3] T. M. Song, "u-Health: Current Status and Tasks Ahead", the Korea Institute for Health and Social Affairs, **(2011)**.
[4] G. S. Besses, "Telemedicine: legal issue", S. S. Sanbar, A. Gibofsky, M. H. Firestone, Theodere R. LeBlang, Legal Medicine, edited by St. Louis: American College of Legal Medicine Textbook Committee, **(2007)**.
[5] W. Jang, S. H. Kim, C. Kim and K. Kim, "A Comparative Study on the telehealth regulations between U.S.A, Australia and Japan for developing the Korean telehealth system", Korean Journal of Medicine and Law, vol. 18, no. 1, **(2010)**, pp. 79-104.
[6] L. H. Schwamm, H. J. Audebert, P. Amarenco, N. R. Chumbler, M. R. Frankel, M. G. George, P. B. Gorelick, K. B. Horton, M. Kaste, D. T. Lackland, S. R. Levine, B. C. Meyer, P. M. Meyers, V. Patterson, S. K. Stranne and C. J. White, "Recommendations for the Implementation of Telemedicine Within Stroke Systems of Care: A Policy Statement From the American Heart Association", Stroke, vol. 40, no. 7, **(2009)**, pp. 2635-2660.
[7] M. Jeff, "Digital diagnosis: liability concerns and state licensing issues are inhibiting the progress of telemedicine", Communications and the Law, vol. 19, **(1997)**, pp. 25-43.
[8] J. Lee and K. Y. Kim, "The Legal Problems about the Medical Liability of the Telemedicine", Korean Journal of Medicine and Law, vol. 9, no. 2, **(2001)**, pp. 129-151.
[9] Y. Jeong, "A Study on the Civil Liability of Telemedicine and Some Legislative Proposals", The Korean Society of Law and Medicine Semiannual, vol. 7, no. 1, **(2007)**, pp. 323-386.
[10] Y. T. Lee, "Mid-to Long-term Plan Establishment for u-Healthcare Activating", Korea Health Industry Development Institute, **(2008)**.
[11] D. Kim and J. Lee, "u-Health: Encounter of Medical Appliances and Information Technology", The Journal of Korea Information Processing Society, vol. 17, no. 5, **(2010)**, pp. 67-77.
[12] H. L. Daly, "Telemedicine: The Invisible Legal Barriers to the Health Care of the Future", Annals of Health Law, vol. 9, **(2000)**, pp. 73-106.
[13] M. Chan, D. Estève, C. Escriba and E. Campo, "A review of smart homes—Present state and future challenges", Computer Methods and Programs in Biomedicine, vol. 91, no. 1, **(2008)**, pp. 55-81.
[14] S. S. Venable, "A Call to Action: Georgia Must Adopt New Standard of Care, Licensure, Reimbursement, and Privacy Laws for Telemedicine", Emory Law Journal, vol. 54, **(2005)**, pp. 1183-1218.