Chapter 4.5
Telemedicine Consultations in Daily Clinical Practice:
Systems, Organisation, Efficiency

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ABSTRACT

This chapter introduces usage of telemedicine consultations in daily clinical practice. Author has describe process of teleconsultation, sample schemes of systems, parties of this process and its roles. Also, main steps of clinical teleconsultation (determination of necessity for teleconsultation, preparation of medical information, observance of ethics and law conditions, preparation of conclusion) are shown. Special part is dedicated to efficiency of teleconsultation – author has pro-pose own complex method for estimation of it. Furthermore, the authors hope that understanding of teleconsultations' process will make it more accessible and easy-to-use for medical practitioners.

INTRODUCTION

In this chapter the author describe approaches to usage of telemedicine consultation in daily clinical practice. First teleconsultations described at 1910s (published in JTT, 1997). Since that time telemedicine is use wide range of technologies – TV, satellite, Internet, cellular etc – for discussion

of serious clinical cases at distance (Bashshur et al,1997, Kamaev et al, 2001, Nerlich et al,1999, Vladzymyrskyy,2004). Annually in the world are spent thousands teleconsultations. It is possible to say that this procedure is most wide spread telemedicine service.

Teleconsultation (telemedicine, remote consultation) – remote discussion of the clinical case via special computer information and telecommunication system to get answers to precisely formulated questions for the help in clinical decisions (Vladzymyrskyy,2003).

Author has propose classification of teleconsultation by 3 main classes: terms of teleconsultation leading, sort (kind) of organisation and technical platform.

1. **By term:**
   - **Synchronous:** All parties use the same telemedicine system in the same time (in real time);
   - **Asynchronous:** All parties use the same telemedicine system with time delay (sequential use).
2. **By sort:**
   - **Formal:** Two or more organizations were involved under a previously signed contract/protocol/agreement;
   - **Informal:** Free discussions of clinical cases in professional Internet societies (via mailing lists, Web-forums);
   - **Second opinion:** Teleconsultations for patients who contacted a medical organization by email or via a special online form/forum.
3. **By technical basis:**
   - Systems at the base of Internet and its services (e-mails, Web-platforms, mailing lists, IP-phones, IP-videoconferences, chats, messengers etc);
   - Systems at the base of special links (satellite, ISDN, ftn-protocol, computer health networks etc);

Systems at the base of cellular phoniness and its services (mobile Internet, SMS, MMS, voice etc).

SYSTEMS OF TELECONSULTATION

As we can see in Figure 1, there are 4 main participants of teleconsultation process (Vladzymyrskyy,2003):

1. **Inquirer:** Legal or physical person representing a clinical case for the teleconsulta-

Figure 1. Sample scheme of teleconsultation
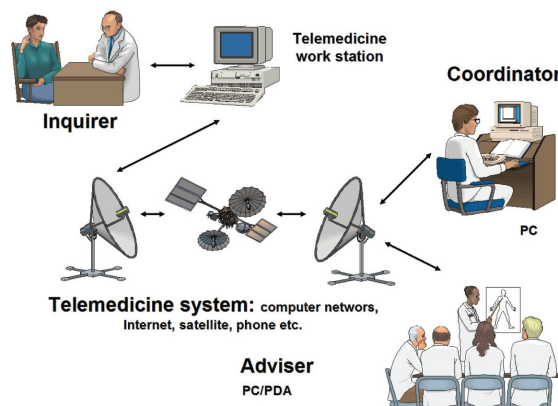
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