

# **BEST TELECONSULTATION'S THEORY PRACTICE MODEL**

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<http://www.telemed.org.ua>

## **Background**

Teleconsultation is one of simple and accessible telemedical technology for the help in acceptance of clinical decisions when the physician collides with a complex and rare pathology.

## **Main goals**

- terminology and classification
- indications
- choose of technology

## **Decisions**

### ***Terminology and Classification***

Teleconsultation - remote discussion of the concrete clinical case for the answer to precisely formulated questions for the help in acceptance of the clinical decision.

Traditionally teleconsultations are classified into: off-line; on-line.

Off-line teleconsultations comprise a type of remote consultations not involving real time network communication (video, chat etc.). Consulting and inquiring physicians exchange information via email, FTP-servers, Internet forums. This type of teleconsultation is used for elective medical care.

On-line teleconsultation is a type of remote consultation involving real time network communication systems: video, chat, ICQ etc. This type of teleconsultation is used for emergency (urgent) medical care.

It should be pointed out that in routine clinical practice these techniques are usually combined: a off-line teleconsultation may be expanded through real time dialogue between the consulting and inquiring physicians through the ICQ, chat or video conferencing, using applications similar to NetMeeting; a real time video conference may be preceded by exchange of medical information through email and so on. Thus, we believe that this classification requires revision. It is practical to divide teleconsultations into synchronous and asynchronous.

Asynchronous teleconsultation is a type of teleconsultation implying consecutive use of certain Internet services by the consulting and inquiring physicians with a time delay (email, Internet forums).

Synchronous teleconsultation is a type of teleconsultation involving simultaneous use of a certain telemedical technique (video conference, email, ICQ) by both physicians.

Also teleconsultations can be classified by organization into:

- formal – two or more organizations are involved under a previously signed contract (mostly under commercial agreements);
- informal – consultations based on a range of Internet services (mailing lists, off-line forums).
- second opinion – teleconsultations for patients who address a medical organization via email or a special online form.

### **Indications for teleconsultation**

We have elaborated the following list of indications for teleconsultation:

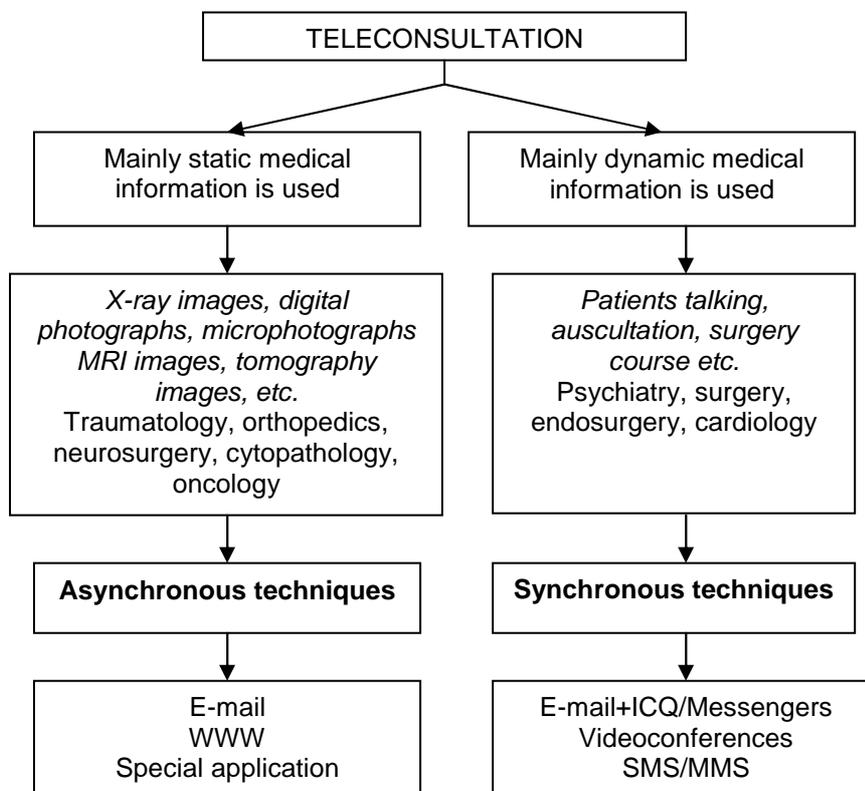
- determination (confirmation) of diagnosis;
- determination (confirmation) of treatment;
- determination of diagnosis and treatment of rare, severe diseases or diseases with a non-typical course;
- determination of complication prevention methods;
- need for a new and/or infrequent surgery (for treatment or diagnosis) or procedure etc.;
- lack of immediate specialists in the necessary or adjacent medical field or lack of sufficient experience for diagnosis or treatment of the disease;
- the patient doubting diagnosis, treatment and its results, complaint analysis;
- decrease of diagnostics and treatment cost without impairment of quality and efficiency;
- search and selection of medical establishment most suitable for urgent and planned treatment of the patient, coordination of terms and conditions of hospitalization;
- medical care for patients located at considerable distance from medical centers, when geographical distance between the patient and health-care provider cannot be overcome.
- search for alternative solutions for clinical tasks;
- obtaining of additional knowledge and skills concerning a given medical problem.

### **Choose of technology**

We propose an algorithm for choice of the telemedical technique (fig.).

Synchronous teleconsultations are most suitable in medical fields where dynamic types of medical information prevail: psychiatry (direct communication between physician and the patient is of importance), urgent surgery etc.

Non-synchronous teleconsultations are most suitable in medical fields where static types of medical information prevail: trauma surgery, orthopedics, dermatology, cytology, pathology etc.



Informal teleconsultation allows "to find" the expert with personal experience in present clinical situation and "to receive" his unique opinion. At formal teleconsultation is possible to solve organization questions of the treatment - terms of hospitalization, methods of obligatory clinical tests and investigations etc. With the help of second-opinion is possible a pre-hospital revealing and diagnostics of various diseases, active work on preventive maintenance of complications and a call of the patient on treatment.

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