Characterization of the extra-medical factors associated in decision making process of the physician in pediatric telemedicine services

Scientific background:

Decision-making is a complex process, which occurs at a time of crisis, under conditions of uncertainty, and it tends to be intuitive in nature. In medicine in general, and urgent care medicine in particular, the decisions made by the medical staff, may be momentous and concerning life and death. In emergency medicine, decision-making is a complex process, which occurs at a time of crisis, under conditions of uncertainty, lack of time and lack of information. Therefore, those engaged in the field, often make decisions intuitively. In medicine, we also use rules of thumb ("heuristics") based on our own and others’ past experience to make a decision quickly. However, this can lead us to incorrect conclusions (cognitive bias), while ignoring other options that could be correct.

Two types of information are known: one is "relevant information" ("medical information")-refers to the accumulated knowledge of medical research. The second type is "irrelevant", "non-medical" information, referring to additional considerations that guide doctors.

Study objectives

The ultimate goal is to identify and characterize non-medical factors that influence the decision-making process in the framework of pediatric telemedicine services.
We would like also to identify the difficulties and challenges of the doctors in this framework, while examining the existing cognitive biases.

**Assumptions**

Since virtual medicine has difficulty in assessing the physical findings of the patient, it is likely that the intuitive part would take a greater role, and non-medical factors have an important weight.

**Methods**

The study combines 2 types of research:

1. Qualitative research - in which 15 doctors involved in pediatric telemedicine will be interviewed. They will be asked about their experiences, the difficulties facing them and the potential impact of non-medical factors on therapeutic decisions.

2. Quantitative research - including a sample of approximately 300 calls and written summaries of the virtual meetings which were performed by the physicians within the framework of the "Pediatrician Online" service of "Clalit" between 2014-2017. Only urgent calls will be analyzed. We will check the compatibility between the medical situation which was described, the accuracy of diagnosis, and the "reasonableness" of the final decision that was taken, while checking the "non-medical" factors and cognitive biases that might be involved.

   Data processing-statistical-analysis will be performed by IBM statistics (SPSS) version 23.

**Uniqueness and importance:**

For the first time, the decision-making process of the doctor in the telemedicine format will be investigated, while examining the impact of non-medical factors on the therapeutic decision. These findings may be very important in medical, organizational, ethical and economical aspects.