

4. SUMMARY

4.1 Purpose of research

Due to the dynamic development of telemedicine, we need to identify the areas in which actions are required to improve the efficiency of the use of telemedicine devices. It was assumed that there are not only patients who cooperate well with the medical staff and make wide use of the telemedicine devices, but also patients with worse predispositions in terms of cooperation.

The study attempts to find an answer to the question about personalisty traits and predispositions of patients which make them use telemedicine devices effectively, and on the other hand, to the question about the causes of bad cooperation, including giving up the possibility of using telemedicine devices.

4.2 Materials and methods

The research is of an observational nature, contains research components with statistical inference, and also has retrospective elements. The study was single-center, non-interventional, and included adult patients of primary care facilities, diagnosed with hypertension (HT). 126 patients participated in the study.

In the course of the study, a telemedicine device used to control arterial blood pressure (ABP) consisted of an upper arm ABP monitor cooperating with a smartphone with an appropriate application installed. The ABP monitor connects with the smartphone via Bluetooth system. The application enables sending the measurements' results to a collective database located on a computer in the primary care facility and also the access to it, both for the patient and for the authorized medical staff. Our patients received a telemedicine device in order to independently perform ABP measurements at home.

In order to assess the level of cooperation and determinants of this cooperation, on the basis of various variables, two proprietary questionnaires were used: initial and final, as well as the following questionnaires: NEO - FFI (diagnosis of personality traits), MINI-COPE (coping with stress questionnaire), SF - 36 (quality of life questionnaire) and Beck Depression Inventory.

A proprietary, original division of patients into 3 groups was implemented, each of which is characterized by a different level of cooperation. The following elements were adopted as positioning criteria for the level of cooperation: continued participation in the

research after the first visit, timely reporting for the second visit, performing the prescribed number of ABP measurements with a telemedicine device and compliance to the recommendation to stop smoking.

4.3 Results and conclusions

As for today, there are no criteria for assessing patients in terms of the level of cooperation regarding the use of telemedicine devices in the literature. Therefore, a tool - for example a questionnaire for determining the predisposition to the effective use of telemedicine devices, needs to be created. It is necessary to undertake various actions aimed at improving the scope and effectiveness of using telemedicine devices by patients who cooperate less well. This study shows that this group includes the elderly, as well as patients with a short course of HT (up to 3 years) and a relatively long course of the disease (over 10 years). Due to the worse cooperation of patients treating HT in primary health care, compared to patients treating HT in specialist clinics, actions to improve this situation need to be taken amongst general practitioners and the medical staff of the primary health care centres. What is more, it was found out that patients with diabetes mellitus type 2 and patients with a high level of conscientiousness cooperate better with the use of a telemedicine device, hence the approach to the patients with other dominant personality traits needs to be individualized. Furthermore, it was observed that higher quality of life index was associated with worse cooperation, which suggest that this group should be also approached as a separate one.

4.4 Keywords

Telemedicine device

Hypertension

Primary health care

Compliance between the patient and the medical staff