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The Future of Telemedicine

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Abstract The article discusses the current problems of health care in Uzbekistan, the possibility of improving it with the help of the latest telemedicine technologies.

Keywords Telemedicine, m2m solutions, Healthcare

Health care is one of the leading areas of social life, and medical care is an essential element of the social and economic development of society.

To date, the level of medical care in Uzbekistan is noticeably inferior to that of European countries and the United States. The low level of the material and technical base, a significant shortage of resources, the low level of laboratory, functional, instrumental diagnostics, low staff salaries, which, ultimately, are the main reasons for the poor quality of medical care for the population. In addition, one of the crisis factors of the system is the concentration of the best doctors in leading medical centers, while the availability of qualified specialists in remote areas is low. It is difficult to solve this problem by traditional methods, but it becomes possible at the intersection of medical, information and communication technologies.

Wireless communication opens up completely new possibilities and applications in the medical field. Telemedicine is the use of medical devices and communication technologies together to monitor a patient's illnesses and symptoms.

According to research firm IHS, the global telemedicine market is expected to grow more than 10-fold from 2018 to 2022. In the US, healthcare professionals are increasingly using remote communications and monitoring technologies to reduce costs and improve the quality of care.

1. How It Works

M2M communications use a device (sensor) to receive an "event" (heart rate) that is transmitted via a network (wireless, wired, or hybrid) to an application (program), translating the received event into usable information (patient requires attention).

2. Improved Ambulance Efficiency

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Emergency medical care is the main component of primary health care to the population. The level of its organization has a direct impact on reducing population losses from acute diseases, poisoning, injuries and other conditions that threaten human life and health. Recently, the importance of emergency medical care as one of the factors of national security has increased significantly. The deterioration of public health, the weakening of the preventive focus in the activities of primary health care, the decrease in the availability of medical care, in addition to the increase in the number of accidents and disasters, the complication of the domestic and foreign political situation due to the growth of international terrorism, all this puts forward urgent tasks to improve the organization of emergency medical care in Uzbekistan. The application of technology in ambulances occurs by installing a GSM device, and GPS modules for determining the location. Operators can receive information about the location of the vehicle in real time. This data is used to help the nearest driver choose the best route to the patient. Remotely, the operator can assist in route planning.

3. Remote Consultation

In some cities of Uzbekistan, equipment of this type is very successfully used. This is equipment for receiving and sending data to doctors. The ambulance doctor who came to the patient can perform an initial examination of the patient and send the data to the doctor who is in the hospital, he will give all instructions for further follow-up.

With the help of specialized software for a smartphone or computer, anyone can send information about their condition and get advice remotely. These are just some of the possibilities for using machine-to-machine technologies. The introduction of telemedicine networks solves the most important social problems: providing healthcare institutions with high-quality medical care, regardless of its location; provision of medical care in emergency situations; consultations in leading medical centers of the world;

observation and consultation during and after complex surgical interventions.

The experience of using telemedicine technologies has shown that telemedicine is an effective tool for achieving this goal.

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