it usually has at least three operating rooms, a CT scanner, an X-ray unit and, of course, an ultrasound scanner. Operations requiring prolonged anesthesia or further observation in the intensive care unit are always carried out in hospitals. There are usually 2 patients in one ward, hospital surrounding helps the patient to relax and recover quickly. In any hospital in Germany, patients are provided with four meals taking into consideration religious restrictions. All wards have a TV or mini computer with TV shows. Besides, patients can choose to have a single ward.

The University hospitals are entitled with a special status, and they appear to be not only the centers of high-tech medical service, but also have enormous research potential. These clinics develop innovative methods of treatment, which gives hope to patients. Some University hospitals are so huge that they form entire medical campuses.

The most of emergency care is provided by private practitioners in their offices. There are medical offices working day-and-night on weekdays and at weekends in all areas of the country. The patient needs to call a single on-call number of his city, where he will be told the address of the nearest on-call doctor. At night, however, the patient is sent to the hospital in search of medical aid. If the patient is in a critical condition or for some reason cannot move independently, emergency services are provided by the rescue service, but it should be noted that this situation must really be a life-threatening condition. The ambulance simply refuses to arrive in case of a high temperature and will recommend you to drink something fever-reducing and go to the nearest private office.

The following phrase may become a motto of the ambulance service in Germany - if you can get to the doctor’s office or hospital yourself, you have no right to call an ambulance. The so-called medical rescuers (Rettungssanitäter) work on most ambulances (Krankenwagen), this corresponds to our paramedic. If the case is severe, a physician (Notarzt) arrives to see the patient; he provides first aid and decides on further hospitalization. In Germany emergency care is provided absolutely for every one, regardless of the availability of health insurance (for example, illegal immigrants), but after the recovery the patient will receive a bill with a very unpleasant sum.

Every tenth resident of the country works in the German health care system, the fact that indicates the high prestige of this industry. Only the best of the best can become doctors, due to high competition and deep selection of candidates. Therefore, in Germany the salaries of doctors are always in the top positions in the wage rating.

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DEVELOPMENT OF IT AND CYBERNETICS IN RUSSIAN HEALTHCARE: PAST, PRESENT, FUTURE
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Today, we all live in the century of technology and science. The use of technology and science has revolutionized our way of life. Today, there is no field of science where we don’t use computer applications. From farming to rocket science, computers have a huge role to play. Medicine is one of many fields that has made tremendous strides in the twentieth century due to advent of computers. IT now is used in medicine in almost all areas. In this article I’m going to reveal a historical way what was passed by information technology in medicine, because it can help us to see the future perspectives more clear.

There is a popular belief that a development of computer technology in Soviet Union didn’t keep up with western capitalistic countries (also known as a «First World») because of political persecution of the cybernetics and researchers who developed that science. But this opinion is wrong because Soviet information technology was developing in pace with the entire world.
First cybernetics` institutes appeared in 1950s in our country. First computers were giant calculation machines what worked on the base of vacuum tubes and punch cards and were requiring a huge space, amount of electricity and staff to keep working, so medical establishments couldn`t afford those machines and were obliged to rent some computing time in special centers and institutes for their tasks` resolution. Those tasks were mainly in field of processing of big data massives, statistics and first experimental attempts to automatize the diagnostic process. The first medical establishment which could organize their own cybernetics laboratory, was the National Medical Surgery institute named after A. V. Vishnevsky, in 1959. In 1960-1970s such laboratories and centers spreaded more widely across the country, became more available for medical sphere workers, the specter of their functions expanded: now these centers work not only in field of statistics, but explore new directions in this sphere such as telemedicine (on Earth and in space). The first experiments in distant diagnostics were made in A. V. Vishnevsky institute of surgery. Consultative diagnostics and disease progressing prediction also developed that time. These directions are still new scientific frontier even in XXI century.

Now medical practitioners have to rely on computers heavily in order to be efficient and successful in their profession. Exchange of medical information among the medical professionals has become a common thing now. With the help of computers they are able to share valuable information with a high level of confidentiality. Modern trends in medical informatics today are mainly similar to directions that were discovered in 1960s. It`s telemedicine, big data processing, automatization of the diagnostic and predictive work. The telemedicine signifies the use of ICT to improve patient`s outcomes by increasing access to care and medical information (the WHO definition) [1]. A top of telemedicine in future will be a robotic surgery with the remote control from another hospital (there is the first Russian surgical robot, which was presented in Moscow, 2017. In some characteristics it exceeds its American analog, da Vinchi). An automatization of the diagnostic work is now realized in self-examination terminals in rheumatological hospital departments, for example. The symptoms chosen by patient in the terminal are degreed in DAS28 scale and putted into his medical card in real-time mode, that saves doctor`s time. Lack of time for management of patients because of filling dozens of forms and documents is going to stay only in past. An artificial intelligence now can analyze a visual medical information and make conclusions. For example in some rheumatological clinics the immunofluorescent samples are analused and a provisional diagnosis is established by a special program. The next challenge for the medical IT at the dawn of a new century is a data safety. There are a lot of precedents of hacker attacks in medical establishments to steal some data in order to get money. There are even life-threatening accidents, for example Tyumen, summer 2018, where hackers turned off all the equipment in surgery during the neurosurgical operation but patient lived only because of doctor`s medical skills. Of course, in future anti-hacker protection in medicine will be akin to antiterroristic protection.

In conclusion I would like to say that a technology now determines healthcare development more than anything else and in future it will continue to develop in dramatic ways. Its development doesn`t seem predictable. Some occupations and fields will go extinct, some of them will appear. But people will never stop need medicine and doctors, it`s indispensable.

References:
1. [Internet recourse]