

MOBILE APPLICATIONS DEVELOPMENT FOR MEDICAL INSTITUTIONS

Maxim GORBATIN

CZU: 004.7:61

maxg1999@mail.ru

This article provides us examples how we can implement mobile development skills in the applicative way, specifically for making applications for medical institutions. Also it describes why it is really helpful for people and why medical applications should be developed.

Let's consider provision of medical services as a system with its interested parties (Fig.).

Firstly, it is the Ministry of Health care which takes care about existing standards and creating new ones for provision medical care and services.

Secondly, it is an institute which takes care of quality of the medical services which are provided by medical institutions and payment for them as well.

Thirdly, medical institutions are interested parties as well because they provide medical services to citizens.

Fourthly, the patients are considered the main consumers of the system.

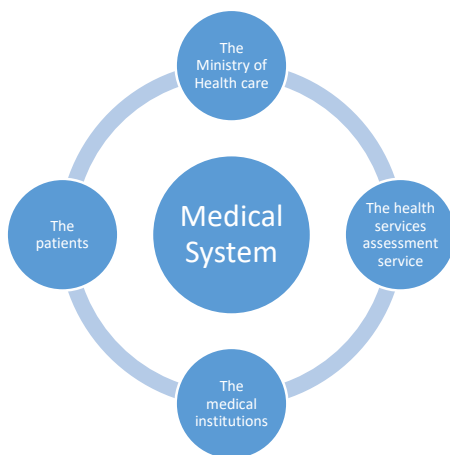


Fig. The interested parties

Today on the different stores are uploaded more than 300 thousands medical applications which run on the following operating systems: Android, iOS, UWP. These applications are made as for common people who take care of their health and want to get medical assistant, as for representatives of medical institutions who can provide it. Consider the main application areas of medical mobile software:

- Prevention of various diseases in the early stages.
- Promotion of healthy lifestyles.
- Fighting bad habits and addictions.
- Providing additional information on various diseases and risk factors.
- Medical calculators that can calculate some diagnostic indicators.
- Providing consultations for doctors and patients.

Let's take a look on table 1 for some examples of medical applications:

Table

The medical applications

Application	Short Description
Apple HealthKit; Google Fit;	These applications are free. They allow you to store and track dynamic of the following indexes: pulse, weight, arterial pressure, daily number of steps, calories burnt by physical exercises.
Lose It! (Summa Health System, The USA)	Mobile application for losing and controlling weight. It was applied by patients who got cured from endometrial cancer and breast cancer [1].
eBalance (Hebrew University of Jerusalem, Israel)	A complex mobile application which allows users to increase individual level of physical activity, reduce body weight, increase level of self-esteem and self-confidence [2].

According to the Bloomberg agency, mobile medicine market size increases every year and will have been about 40 billion of dollars by the next couple of years.

The growth of elderly people, the increase in the number of cases of chronic diseases, the huge quantity of settlements that are located in hard-to-reach places of the country, as well as the lack of personnel

show the need for the introduction of new technologies in the health care system.

It is also promising to develop applications that allow complex data assessment to better control the disease and its treatment even remotely.

New applications and devices allow you to perform a more effective disease prevention process, as well as optimize the healthcare system. Via technological growth, devices and applications will become more miniature and functional. Any person will be able to monitor their health without resorting to the help of a doctor. Patient medical records can be integrated into other applications that will remind you of a visit to a doctor or taking medication. The future is behind the integration of mobile technologies, since it is health informatization in the future that can become the main link in the cure of many diseases that were previously considered incurable.

References:

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