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### **Executive Brief**



Despite of the technological progress of the society, healthcare sector has to struggle with practical implementation of its achievements sometimes. It occurs mainly due to the reliance on the traditional ways of medical care and treatment. This paper researches the possibility of managing one of the issues in modern medicine with the help of a program that widely uses electronic health records and the related software. The objective of the current executive brief is to outline the proposal of a strategy that increasing electronic health records competence allows healthcare staff. Moreover, it is expected that the strategy would benefit a wide range of healthcare stakeholders. It is suggested that a proposal of mitigating a problem by means of introducing a gaming framework is one of the best solutions. This approach would allow medical practitioners to gradually increase the awareness of the professional aspects of electronic health records and lead to a wider usage of the technology. The proposed executive brief is beneficial for all medical organizations and their leaders, who may be interested in adequate implementing a digital technology in their professional activity.

# TECHNOLOGY AND HEALTHCARE PROMOTION

The research of the evidence related to the digital technology usage in different health education programs revealed that there are



organizations that promote it in different areas. For example, World Health Organization (WHO) considerably supports initiatives directed towards increasing the awareness of its stakeholders in low- and middle-income countries of different technological instruments used for educating healthcare aspects (Jackson, 2012). One of such technological educational programs aims at implementing a CommCare mobile phone application for community health workers (CHW). Its general aim is to educate healthcare practitioners on basic measures that allow reducing infant and maternal mortality in low- and middle-income countries. The WHO stresses that this mobile phone application has helped CHW in many countries, such as India, Tanzania, Zambia, Mexico, and many other (Jackson, 2012). Therefore, such evidence allows stating that it is possible to use nursing mobile software as a part of technological educational program directed towards promoting public health quality.

#### THE STATEMENT OF THE PROBLEM

Modern health care communities and separate practitioners gradually shift to the usage of electronic health records (EHR). The major reason of this is that EHR help in clarification, documentation, and communication of basic patient care aspects (Englebright, Aldrich & Taylor, 2013). However, the implementation of this technology is often connected with different problems that either restrain its practical application or lead to the refusal from it as from an irrelevant issue. Lack of informatics competence among the members of the nursing staff is among the most often reported problems related to the given case. For instance, the research involving EHR use by nurses revealed such problems as "missing

data, erroneous data, uninterpretable data, inconsistencies among providers and over time, and data stored in noncoded text notes" (Bayley et al. 2013). Therefore, it proves that healthcare practitioners have problems in operating with the digital data considering that this format is comparatively new for them. The exposed problem approves one of the postulates of Diffusion of Innovations Theory that the advances proposed by the technology are equalized by challenges associated with their implementation (Boushey, 2012). Despite the fact that the theory is old and its origins are almost 100 years old, it adequately describes the possible barriers to the adoption of any new idea or practice (Sharma, 2016). Consequently, it is necessary to development a relevant measure that would allow mitigating the issue and guarantee smooth transition of the hospitals and healthcare centers from ordinary to electronic health records.

#### **PROPOSAL**

It is suggested that the exposed issues of EHR usage by healthcare providers may be mitigated by means of mobile gaming application introduction that would boost the required nursing informatics competence through a gaming process. This approach can be described as the improvement of informatics awareness by means of its tools that allow approaching different individuals and groups in a healthcare setting (Pender, Murdaugh & Parsons, 2011). Moreover, the given strategy would allow empowering healthcare practitioners with the latest technology, improve primary healthcare through education training, and apply science and technology to crucial health problems (Pender, Murdaugh &

Parsons, 2011). As a result, it is proposed to create a smartphone and computer software that would allow exploring the aspects of the EHR usage and help in mitigating the most common challenges associated with the given activity. The gaming process should be connected to the healthcare activity of a particular domain of a healthcare practitioner, which is why he or she would operate a digital model of oneself. The idea is that the digital model would face typical daily situations that gradually increase their complexity and the need for the usage of EHR. For instance, a patient may need a blood analysis that is stored in EHR database of another clinic or it is required to find a solution to a particular medical problem with the help of the existing digital data. The most important aspects of this software should be the existence of a virtual tutor, the checklist containing failed attempts of EHR treatment, and the possibility to complete the tasks several times. At the end of the digital course, the healthcare provider should be proposed to install one of the commonly used EHR software. As a result, this approach would allow healthcare workers practicing self-learning by using a modern nursing informatics program. The scaling of missions from easy to complex and the existence of a tutor would allow mitigating typical flaws of EHR usage without wasting time of other practitioners acting as tutors. Moreover, it is will be possible to access the software any part of the day and at any setting. Consequently, the nurses and physicians would achieve stable progress by daily learning through a gaming model. Another benefit of this approach is that it allows regulating all three components of hardness, which are control, commitment, and challenge (Sharma, 2016). As a consequence, the implementation of this strategy would allow promoting health by means of empowering healthcare practitioners with advanced

## POPULATION OF INTEREST, BARRIERS AND OUTCOMES

The population of interest of the proposed initiative is a large scope of healthcare practitioners from registered nurses to administrators, surgeons and other healthcare experts. At the same time, the targeted audience is mostly nurses and physicians as they deal with many patients daily. As a result, EHR gaming model would serve them best. Furthermore, the design of the proposed intervention allows creating using the in-built assessment tools that make it possible for the healthcare practitioners to obtain the marks for their actions and final solutions. This measure would help them focus on the most problematic issues and fix them manually.

The analysis of the current evidence-based practices allows stating that mobile applications are an efficient instrument in promoting community health. For example, WHO approved that CommCare mobile phone application for CHW in different countries helped them improve their knowledge and expertise (Jackson, 2012). Similarly, Brusse, Gardner, Mcaullay & Dowden (2014) state that mobile application-based programs helped healthcare practitioners in promoting community health in Australian indigenous populations. However, some mobile health software has problems that may lead to failure of their implementation. For example, experts argue that QPG Health developed for enhancing communication between patients and physicians failed due to the invalid business strategy shifting to purely virtual communication instead of the

reality-based one (Tu, 2015). Therefore, it is important to support the proposed program with a strategy that would allow engaging key stakeholders more effectively. Thus, in order to raise their interest, it is suggested to distribute the software on a free basis supported by non-obligatory donations. Such measure would help reach a wide scope of population and promote the product. However, after a year of free use, the model should change to basic and premium versions, where the premium one would allow the users to communicate with each other and share their knowledge. As a result, despite the fact that the model will be developed in a way to save costs, it will greatly depend on the public financial support, which will be determined by the quality and usefulness of the software.

At the same time, it is possible that the defined population would face specific barriers associated with the implementation of the technology. Such barriers may include the lack of competence in smartphone or computer usage, the need to spend some time for basic introduction with the software functions, and the financial issues. Similarly, some programs may not match the workflow of nurses and be ignored (Piscotty, Kalisch & Gracey-Thomas, 2015). In this respect, experts highlight the need for collaboration of specialists in the areas of nursing and data in order to enhance the sphere of nursing technology (Brennan & Bakken, 2015). Thus, it is critical to advocate the proposed strategy as more efficient than tutor-based teaching of EHR usage as it is more cost-saving. For instance, one may order the software and use it on the lifetime basis or pay monthly or weekly for the courses of EHR usage. In general, it is expected that the obtained benefits exceed the disadvantages, which is why the strategy should be implemented in order to access different healthcare

communities. As a result, it would help both healthcare sector employees and their patients by promoting health in different domains of medical practice.

### CONCLUSION

Summarizing the presented information, the current executive brief proposes a strategy that allows reaching the objective of enhancing medical practice by means of developing relevant self-learning software for healthcare practitioners. Thus, it is recommended to create a gaming application for smartphones and computers for medical practitioners to increase their EHR usage competences manually. The benefit of this approach is the availability of self-control features, as well as the possibility to access the application any time that would boost the speed of self-learning. As a result, it is expected that its users would learn the basics of EHR usage more quickly, which would mitigate the EHR related problems that they face on a daily basis. Nevertheless, despite of the fact that this approach may experience such barriers as, for example, the absence of any informatics competence in the target population, its benefits outperform the disadvantages. Therefore, the local nursing and patient population in any domain of healthcare would benefit from the usage of the proposed EHR self-learning gaming software.