

Serious game about safe surgery for nursing team

RESUMO | Objetivo: planejar e desenvolver um serious game como recurso adicional de capacitação para profissionais de enfermagem de nível médio, voltado ao cuidado seguro do paciente cirúrgico. Métodos : Trata-se de uma pesquisa metodológica, aplicada, para desenvolvimento do jogo nomeado como: Nurses for Safety, que tem como tema a segurança do paciente cirúrgico, e abrange a meta quatro (cirurgia segura) da OMS para Educação Permanente (EP) de profissionais de enfermagem de nível médio. Desenvolvida entre 2017 e 2018. Resultados: Percebe-se que o desenvolvimento do papel do enfermeiro na produção do serious game permitiu a este trabalhar com multidisciplinaridade, organizar as informações técnicas para a realidade do grupo de trabalho, exercitar sua criatividade na produção do conteúdo instrucional e na criação do roteiro. Conclusão: Apesar de desafiador, é estimulante proporcionar estratégias inovadoras que promovam a capacitação profissional refletindo na melhoria do cuidado por meio de reflexões sobre a prática profissional.

Descritores: Segurança do paciente; Educação em saúde; Informática em enfermagem; Tecnologia educacional; Educação continuada.

ABSTRACT | Objective: to plan and develop a serious game as an additional training resource for mid-level nursing professionals, focused on the safe care of surgical patients. Methods: This is a methodological research, applied, for the development of the game named: Nurses for Safety, which has as its theme the safety of the surgical patient, and covers the goal four (safe surgery) of the WHO for permanent education of health professionals mid-level nursing. Developed between 2017 and 2018. Results: It is noticed that the development of the role of nurses in the production of the serious game allowed them to work with multidisciplinary, organize technical information for the reality of the work group, exercise their creativity in the production of instructional content and in the creation of the script. Conclusion: Although challenging, it is stimulating to provide innovative strategies that promote professional training, reflecting on the improvement of care through reflections on professional practice.

Keywords: Patient safety; Health education; Nursing informatics; Educational technology; Continuing education

RESUMEN | Objetivo: planificar y desarrollar un juego serio como recurso formativo adicional para profesionales de enfermería de nivel medio, enfocado a la atención segura del paciente quirúrgico. Métodos: Se trata de una investigación metodológica, aplicada, para el desarrollo del juego denominado: Enfermeras por la Seguridad, que tiene como tema la seguridad del paciente quirúrgico, y cubre la meta cuatro (cirugía segura) de la OMS para la educación continua de Profesionales de la salud de enfermería de nivel medio. Desarrollado entre 2017 y 2018. Resultados: Se advierte que el desarrollo del rol de las enfermeras en la producción del juego serio les permitió trabajar con multidisciplinariedad, organizar la información técnica para la realidad del grupo de trabajo, ejercitar su creatividad en la producción de contenidos instruccionales y en la creación del guión. Conclusión: Aunque desafiante, es estimulante brindar estrategias innovadoras que promuevan la formación profesional, reflexionando sobre la mejora del cuidado a través de reflexiones sobre la práctica profesional.

Palabras claves: Seguridad del paciente; Educación para la salud; Informática de enfermeira; Tecnologia Educacional; Educación continúa.

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INTRODUCTION

Ensuring safety for patients who require health care is a present and imposing challenge, with relevance in the care and sociocultural context. Patient safety is defined as the reduction, to an acceptable minimum, of the risk of unnecessary harm associated with healthcare. 1 In this context, the hospital environment, specifically the operating room, has a greater propensity for the occurrence of errors, considering its different dynamics in relation to other sectors. 2;3

In Brazil, in 2013, the Ministry of Health (MH) launched the National Patient Safety Program (PNSP - Programa

Nacional de Segurança do Paciente), which instituted actions to promote safety, EP of health professionals and accountability for safe care, with a focus in improving the quality of care offered in health services 4, enabling continuity of the work of the 2009 WHO Safe Surgery Saves Lives Manual. 5

It is known that classic and traditional training does not result in change in the organizational culture of health services in view of the dynamic scenario of professional health practices, especially in the current context of information and knowledge with the insertion of health technologies. 6-8 Thus, the use of computerized educational technologies can contribute to the development of practices for safe care, based on professional ethics. It should be noted, however, that for these tools to be successful in the training of health professionals, a didactic transposition must take place 9, which must allow the individual the full condition to understand, learn and give new meaning to scientific knowledge in the reality of action. 9

Therefore, this study is part of a project that aims to develop a computerized educational game called Nurses for Safety, whose target audience is the nursing teams, and the theme focused on the goals of the PNSP, with the different phases of the game correspond to each of them: safe medication administration, safe surgery, hand washing, prevention of falls and pressure injuries, effective communication, patient identification. The objective is to report on the process of preparing the content related to surgical patient safety, covering goal four of the WHO safe surgery protocol.

METHOD

This is a methodological research, aimed at technological production. 10 For execution purposes, technological production can be classified into four

phases, as follows:

- 1st Conception and planning;
- 2nd Content development and instructional design execution;
- 3rd Validation by the target audience and by judges; and
- 4th Implementation of the pilot



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project. 11

This study contemplates the first two phases for technological production, and in the first phase the theme to be addressed was defined considering the target audience, the planning of the educational objectives of the safe surgery module of the educational game was carried out and the necessary re-

sources for the development of the research were raised. 11

In the second phase, a bibliographic survey was carried out to define the theoretical framework to be used, selection of appropriate media for the theme and educational objectives, and ways of measuring learning by the target audience and motivational strategies were selected, instructional material was prepared, media and didactic procedures were selected. 11

The serious game theme for the improvement of professional practice refers to goal four (safe surgery) of the WHO Safe Surgery Saves Lives Manual. We opted for a cutout, addressing only the transoperative period that the nursing team is responsible for, in order to establish the educational objectives of the serious game. Regarding the target audience of the serious game, nursing technicians and assistants were defined.

Considering the need to develop new teaching-learning strategies in the continuing education of mid-level nursing professionals, aimed at the safe care of surgical patients, specifically in relation to safe surgery, the following guiding question was formulated: "How to insert instructional content related to safe surgery in a serious game for the continuing education of mid-level nursing professionals?" This question supported the development of the serious game. The study was carried out between 2017 and 2018.

RESULTS







The challenges that permeated the entire process of creating the serious game were to make it attractive, interactive, motivating and educational for mid-level nursing professionals. The development of the serious game named Nurses for Safety contemplated the particularities of each step of the Surgical Patient Safety protocol, in all processes in which mid-level nursing

professionals are inserted. Then, it was defined how each of these steps would be represented in terms of concrete actions, considering the reality of professional practice and the language of the world of work.

The educational objectives, defined according to the game plan, directed towards the contents that professionals needed to learn and towards what should be evaluated, thus determining parameters and criteria for decision-making. All information for the technology was extracted and organized into a game plan.

After defining the scope of the game, the scripts of three fictitious cases were created, but faithful to the reality of nursing work in a surgical center, the other phases of the educational game were organized, and new characters, figures, images and scenarios were created. The entire assembly and creation of game scenarios were collaboratively shaped, involving several professionals seeking to maintain

Table 1 – serious game characters – professionals and patients.

Professionals		
		
Sara Nursing technician	Eduardo Nursing technician	Gabriel Nurse
		
Uiara Surgeon	Rafael Resident doctor	Ana Anesthesiologist

Patients



Patient case 1



Patient case 2



Patient case 3

Source: Giacomo, 2019¹².

Table 2 - Serious game setting.



Hospital entrance



Surgical center reception



Operating room with toilet



Operating room without patient



Patient-free recovery room



Clipboard with surgical safety checklist

Source: Giacomo, 2019¹².

the appearance of the screens and the structuring of content within a logic that reflects professional practice, using illustrations consistent with the real world, as evidenced in table 01 and 02.

DISCUSSION

In this study, the WHO Manual - Safe Surgeries Save Lives, was the theoretical support for the proposal, respecting the MH recommendation that the protocols to be considered in patient safety programs should cover different realities. 4;5

Among the main challenges for the correct use of protocols in the professional sphere is the lack of knowledge about the importance and lack of standardization of processes. 12-14 In this way, it is possible to recognize the PE as a strategy to instruct the practical work of health professionals, contributing to the enhancement of the quality of care. 15

There are several modalities and technological strategies that can be used to perform the PE of professionals in the health area, among the possibilities there are educational games. For games to achieve their educational goal and to contribute significantly, some fundamental principles must be followed during product construction, namely: the freedom to experiment and fail, the possibility of selecting new identities, and freedom of interpretation and effort. 13 The main difference between an educational game and a game for

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entertainment is the focus on pedagogical objectives, which justifies greater attention to the planning phase.

In the creation phase of the educational material, a summary of the elements that make up the Safe Surgery module was carried out. 5;19 Furthermore, the concern with establishing educational objectives to be incorporated into the game script is highlighted, with a focus on the attributions of nursing technicians and assistants as conductors of the surgical safety checklist. The information presented in an educational game needs to be qualified and facilitate access for those who play, simplifying understanding and respecting the learning time. 20

It is believed that educational games enable self-assessment, and consequently encourage a change in behavior by allowing players to reflect on their professional reality when aligned with the concepts covered in the game. 21-24 To promote a pleasant experience and acquisition of knowledge by the players, it is necessary to emphasize the individual and not the technology, so it is necessary to provide visual comfort of the illustrations with the standardization of colors and description of the images. 23

Inserting feedback with concise information that leads to learning demands special attention so that educational games become as engaging as pure entertainment games. 13

It is essential to emphasize that the material developed is not static and

unalterable, but must accompany the updates offered in the area, in addition to allowing changes according to the demands of different realities.

CONCLUSION

Strategies for the education of nursing professionals is challenging and

simultaneously stimulating, it contributes to the production of new knowledge, as well as teaching methodologies that promote the improvement of care in the work environment through reflections on professional and multi-professional practice.

It is noticed that the development of the role of nurses in the production

of the serious game allowed them to work with multidisciplinary, organize technical information for the reality of the work group, exercise their creativity in the production of instructional content, script creation and integration of the team.

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