METHODOLOGY DEVELOPMENT IN BASIC SURGERY TECHNICS (E-LEARNING)

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ABSTRACT

E – learning is presented as a learning mode in distance education. On this mode, the internet is used as a support to develop new online learning tools. Facebook, Twitter, and Skype are used as electronic platform for such purpose where information is exchanged in an appropriate way and following the data protection norms. Training instruments: documents, images and videos, created with educational aim, which come from the new era known as WEB 2.0, among others. Our technology sets out a distance education course to get up – to - date basic techniques for doctors and nurses located in urban and extra – urban areas or with difficult access (rural areas).

KEYWORDS

Keywords: Telemedicine, e – learning, e – health, web 2.0

INTRODUCTION

Telemedicine is a discipline that takes on the interest of a considerable part from the scientific community.

The telemedicine is basically distance medicine. It is an application of medical telematics and the term telematics refers to the complementary information technology application and telecommunications. It takes on as in diagnosing but also as in treatment to be largely used for distance medical education. [(1)]

The strategy to include Telemedicine in Venezuela's medical education takes place in 1997, when University of Zulia researchers got trained in the prestigious images advance technology center (CATAI) at the University of Laguna in Tenerife, Canary Islands, Spain, under the supervision of Dr. Olga Ferrer Rocca [(2)]

In 2005, the Telemedicine group of Venezuela was created at the University Hospital Dr. Adolfo D ´Empaire, attached to the University of Zulia in Cabimas city, an important oil city in Venezuela.

Telemedicine takes two essential working areas: The practice and training. As part of the practice, stands out: Teleconsultation, remote diagnosis, remote monitoring, clinical cases discussion between health professionals, in order to get second opinions (teleconferences), digital data storing in medical file cards, having in mind at all times the up – to –date data protection law norms of each involved country.

In regards to education, the distance learning is done by health professionals, taking advantage of most of the educational resources´ benefits. [3]

E – health suggests diagnosing, treatment and medical education (e – learning), in which they optimize the health care services, saving time and money, more over, providing access to distant areas to get specialized attention, clinical cases discussion to make decisions when technologies are applied and a appropriate use of the clinical data.

E – learning is an approach to teach and to learn that representing all or part of an applied educational model is based on the use of devices and electronic tools to improve the access to training, communication and interaction that provides the acquisition of new understanding mode to develop learning.[4]

This activity decreases time and cost, which applies available tools like Facebook, Twitter, Google Drive and Skype, making possible any doctor or nurse, to get access through a computer, tablet or smartphone.[5]

GENERAL GOAL

- To apply the basis of Telemedicine in medical education (e – learning) to get up – to – date basic surgery techniques for doctors and nurses.

SPECIFIC GOAL

- To create up – to - date courses for doctors and nurses located in urban areas, rural areas or with difficult access.
- To contribute creating knowledge and updated basic surgery techniques.
- To promote the used of E – learning in the clinical practice on the health team (doctors and nurses)

JUSTIFICATION

Our group was the pioneer group in the west of the country in experimenting these improvements within the public health system, where hospital and distant walk – in clinics located in rural areas or with difficult access.

Telecommunications are referred to the transmission and reception of electromagnetic signals that include sounds and images, which are tools that make possible to get access to the different

working areas of the human being. As a result, health is not an exception. This pile of applications comes from the Telemedicine and its educational tool (e – learning).

The use of technological equipment is highly spread worldwide, which provides a huge quantity of activities. This progress makes ourselves involved more and more, leading us to make part of the "New Technological Era".

BENEFITS

- New and innovative teaching resource.
- Updated information.
- To motivate new technologies.
- To unite medical personnel (doctor and nurse)
- Urban and rural areas integration
- Methods and techniques discussion between participants from distant countries.
- Easy access through computers, tablets or smartphones
- Costs decrease

MATERIALS AND METHODS

This is a prospective, descriptive and experimental study, which methodology is based on the creation of an updated course in basic surgery techniques (stitches) using the available tools on social nets like Facebook, Google Drive and Skype.

It was created through a free blog in the social net Facebook, under the "Event" mode, called" E – learning, update in stitches". Beginning its first edition in December 2013 and finishing in July 2014. Publicity was done through electronic posters in jpg format. Registering a total of 37 participants, distributed among 8 doctors and 29 nurses from countries like Venezuela, Spain and Colombia.

A complete program of the course was sent, as well as the names of the professionals in charge of developing each chapter (contributor doctors)

Once explained the reading times, which summarize a guidebook in portable document format .PDF. Digital documents, platform of software or hardware independents. (8 pages maximum) which they were handed in to each participant in an interval of 15 days and through 3 ways:

1. Internal messenger (Facebook-Twitter)

2. Google Drive

3. E-mail

Every end of the month and later to the end of the reading and doubts clarification with tutors, the participants had to take a test, in which they could get access on the specific day, from any computer, tablet or smartphone.

It was established a data base in Google Drive Documents with the questions of the test and later created a named like “professor” which contains in each grid the correct questions, being able at the end to finish the set day to assess and to use the determination of the assessment and to obtain the results, which come in Latin-American (1 – 20 points) or European format (1 – 10).

The assessment tool used was FLUBAROO. The Flubaroo is an application that allows checking tests in an automatic way made through questionnaires from Google Drive. Also, it provides statistics data and graphs, which offers the possibility to send the results to each participant through e – mail.

Those participants who get to finish the programmed modules (theory/concepts); they will get a kit, containing basic stitching equipment + anatomical model made of gel. Later to this, the participants will get a day in which they will get connected through Skype to take a practical exam. This will consist on:

1. The final assessment will be practical through Skype in which the doctor or nurse will be able to solve a clinical case (injuries).
2. To make in the anatomical model made of gel (a skin pad to make stitches, model 3B Scientific W19310 11x14 cms) one of the basic surgery techniques that the examiner doctor indicates with the stitching basic kit (scalpel, needle holder, dissecting forceps, straight mayo scissors, scalpel blades, stitching sutures (threads)) previously sent to the participant’s place.

Once finished the E- learning course, the participants will get a certificate supported by the Telemedicine group of Venezuela, based in University hospital Dr. Adolfo D ´Empaire in Cabimas, under the direction of the mentioned institution, Dra. Elizabeth Guanipa Monteverde.

PRELIMINAY RESULTS

It has been given 7 topics and made 3 assessments. As for the participants as for the tutors, they are motivated and willing to continue working under this methodology.

Thanks to new technologies, the “online” participants can communicate and contribute with their peers and tutors (teachers, mentors) without spacey and temporary limitations. [(6)]

DISCUSSION

Given to its characteristics and the technological support, it constitutes in one alternative for those who combine work and updates, which makes unnecessary to go to a permanent classroom. [(7)]

The term Web 2.0 comprises those websites that make possible to share information allowing users to interact and to collaborate among them as content creators, generated by a virtual community. –which makes a huge difference between static website where user are limited to a content passive observation

Tool like Facebook, twitter, YouTube, Skype, Google, used for this research are within the Web 2.0 definition. Demonstrating an evolution in the applications from static to dynamic, where the collaboration of the user is necessary. [(8)]

The term Web 2.0 is associated very close with Tim O´Reilly, due to the O´Reilly media Web 2.0 conference in 2004.[(9)]

In conclusion, Web 2.0 allows us to make collaborations among users. It will not only allow improving the topics in classes but also it can be used at the work place.

Web 2.0 allows students and teachers to improve the used tools on the formation and the implementation of this learning in the institutions development.

The progress of telecommunications and the easy access to the social nets on the internet have let courses like this to be possible. On this case, an event created in Facebook and with assessment tools under Google Drive application Flubaroo.

Despite this course is not finished yet. It has been very satisfying to the most of the health professionals in different places. Getting a special mention in the first edition from Centro Socio Sanitario Nuestra Señora del Pino (Las Palmas de Gran Canaria - Grupo ICOT) and for the second edition with the Rural Hospital type I personnel in Chichiriviche (Falcón – Venezuela)

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