English

Special Interest Group in Simulation in Health: building a collaborative network in the simulation area

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Abstract

The Telemedicine University Network (RUTE) is an initiative of the National Network of the Ministry of Science Research, Technology and Innovation (MCTI) aimed at integrating public university and teaching hospitals, medical schools and research institutions is considered a pioneer and a the world's largest. Simulation is an area of knowledge that is expanding in the various health care levels and is recognized as an effective methodological tool for teaching, assistance, training, and at the same time opens the door to a wide field of research. Being a teaching new methodology need professional training and exchange of experiences in order to ensure the widest dissemination of knowledge. The article describes the process of the creation of a Special Interest Group in Simulation in Health and prospects of cooperation between the institution on this subject. The inaugural session was held in August 2016 and participated in the three sessions held 120 listeners from various institutions. One of the speakers was a professor at the University of Porto (Portugal). The profile analysis of participants shows that there is still a modest participation of academics in relation to the participation of teachers and other professionals. The data also show the great interest of nursing and other health areas in the simulation theme. Most participants are in northeastern Brazil.

Keywords: *Simulation; Medical Education; Videoconferencing.*

Resumen

Grupo de Interés Especial en Simulación en Salud: Construyendo una red de colaboración en el área de simulación.

La Red Universitaria de Telemedicina (RUTE) es una iniciativa de la Red Nacional de la Investigación del Ministerio de Ciencia, Tecnología e Innovación (MCTI), destinado a la integración de los hospitales universitarios y de enseñanza públicos, escuelas de medicina e instituciones de investigación se considera un pionero y una la mayor del mundo. La simulación es un área de conocimiento que se está expandiendo en los distintos niveles de atención de la salud y es reconocido como una herramienta metodológica para la enseñanza efectiva, asistencia, capacitación, y al mismo tiempo abre la puerta a un amplio campo de investigación. Al ser una la enseñanza de nuevas ametodolgia necesitan capacitación profesional y el intercambio de experiencias con el fin de garantizar la más amplia difusión de los conocimientos. El artículo describe la creación de Grupo de Interés Especial en Simulación em Salud y perspectivas de la cooperación entre las instituciónes sobre el tema. La sesión inaugural se celebró en agosto de 2016 y participó en las tres sesiones celebradas 120 oyentes de diversas instituciones. Uno de los oradores fue profesor de la Universidad de Oporto (Portugal). El análisis del perfil de los participantes muestra que todavía hay una modesta participación de los académicos en relación con la participación de maestros y otros profesionales. Los datos también muestran el gran interés de la enfermería y otras áreas de salud en el tema de la simulación. La mayoría de los participantes se encuentran en el noreste de Brasil.

Palabras clave: *Simulación; Educación Médica; Videoconferencia.*

Resumo

Grupo Especial de Interesse em Simulação em Saúde: construindo uma rede colaborativa em Simulação em Saúde

A Rede Universitária de Telemedicina (RUTE) é uma iniciativa da Rede Nacional de Pesquisa do Ministério da Ciência, Tecnologia e Inovação (MCTI) cujo objetivo é integrar hospitais públicos universitários e de ensino, Faculdades de Medicina e Instituições de Pesquisa sendo considerada pioneira e uma das maiores do mundo. A Simulação é uma área do conhecimento que está em franca expansão nos diversos níveis de atenção à saúde e é reconhecidamente uma ferramenta metodológica eficaz para o ensino, assistência, treinamento, e ao mesmo tempo abre portas para um campo amplo de pesquisas. Por ser uma metodolgia nova de ensino é necessário capacitação de profissionais e troca de experiências, de forma a garantir a maior difusão do conhecimento. O artigo descreve o processo de criação de um Grupo de Interesse Especial em Simulação em Saúde e as perspectivas de colaboração entre as Instituições sobre o tema. A sessão inaugural foi realizada em agosto de 2016 e nas três sessões realizadas participaram 120 ouvintes de instituições diversas. Um dos palestrantes foi um professor da Universidade do Porto (Portugal). A análise do perfil dos participantes demonstra que ainda há uma modesta participação de acadêmicos em relação à participação de docentes e outros profissionais. Os dados apontam também o grande interesse da área de enfermagem e outras áreas da saúde no tema da simulação. A maioria dos participantes são da região nordeste do Brasil.

Palavras-chave: *Simulação; Educação Médica; Videoconferência.*

INTRODUCTION

The University Network of Telemedicine (RUTE) is an initiative of the National Research Network of the Ministry of Science, Technology and Innovation (MCTI), whose objective is to integrate public university hospitals and teaching ones, Faculties of Medicine and Research Institutions being considered a pioneer and one of the largest in the world. The network, among many activities, encourages the integration and the collaboration among health professionals through Special Interest Groups (SIGs). There are currently 50 more SIG's that promote debates, clinical case discussions, classes and distance diagnoses in various medical specialties and subspecialties, as well as research and management groups[1,2].

The Faculty of Medicine of the Federal University of Minas Gerais (FM UFMG) made its adhesion to RUTE in December 2015 and since then integrates and collaborates with the activities of the network. From the goals agreed upon in the joining act, the Faculty of Medicine proposed the creation of the SIG Simulation in Health (SimSaúde), which, after the planning and approval stages of the SIG by the RUTE Advisory Committee, it started operating in August 2016.

The simulation is an area of knowledge that is expanding at various levels of health care and it is recognized as an effective methodological tool for teaching, assisting, training and at the same time it opens the door to a broad field of research. In addition, it has a multidisciplinary character, enabling the application and the conjugation of knowledge and experiences of several health areas (medicine, pharmacy, nursing, occupational therapy, management systems, patient safety, among others) involving technological innovation, communication skills , bioethical issues, among others. The simulation seeks to replace and amplify real experiences with experiences, created, guided, and controlled, that evolve or replicate aspects of the real world in an interactive way[3]. It has been used to teach psychomotor, cognitive, affective and psychosocial skills, applying the concept of controlled and intentional practice for acquisition and retention of these skills. The use of health simulation allows the practitioners and students (in their training) to practice the necessary skills in a fully controlled environment in which the error can occur, without risks to the patient's safety. It requires the professional's knowledge and experience who should act as a facilitator of the learning in order to promote the development of specific skills and competencies. It uses as resources several technologies: skills training manikins, high fidelity mannequins, which replicate physiological and pathological conditions as a human being, creating multiple scenarios that allow the creation of the most realistic scenarios possible[4,5].

The new medical curriculum guidelines drawn up by the Ministry of Education[6] dictate that the Faculties of Medicine have Simulation Laboratories, but few professionals are trained and qualified for that. In addition, there are several models of mannequins on the market and it is necessary to plan the choice of the material to be acquired and the physical space to be used. In some institutions there is an assembled laboratory, but it is not used because there are no human resources prepared and / or motivated to do so.

The proposal for the creation of the SIG SimSaúde meets these demands and the need to share experiences and expand knowledge about this teaching methodology based on simulation in the health area.

This article describes the process of creating the SIG and the perspectives of collaboration in a current theme and of fundamental importance in the education and training environment in health.

METHOD

The Special Interest Groups are collaborative activities between health professionals and geographically distant institutions, mediated by RUTE. There is usually a virtual session or meeting per month of each SIG, by web or videoconference through agendas (themes and speakers) previously defined biannually or annually agreed upon by SIG participants.

Any institution that formally integrates the RUTE may propose to create a SIG following a standardized protocol. After approval of the SIG by the advisory committee any other teaching institution and collaborative research or not of the RUTE can request participation in the sessions of the SIG's whose schedules are available in the portal of the RUTE[1].

In order to submit a proposal for the creation of SIG, a minimum of four institutions must be previously admitted. In the proposal it is mandatory to describe and detail the objectives of the SIG, the dynamic of operation, proposal of the day / time of the sessions, target audience, goals, monitoring indicators and annual agenda of meetings as theme and responsible speaker.

These stages were performed by the Faculty of Medicine group, proponent and coordinator of SIG SimSaúde. Every process since the decision to create the SIG, articulation with the Institutions, submission of the proposal and the committee's opinion lasted about six months.

The agenda was defined with the participation of an international institution with expertise in Simulation. The sessions last for 1 hour, every second Tuesday of each month. The group's option was to use only videoconferencing technology. The main characteristics of SimSaúde are summarized in Table 1.

Table 1: General characteristics of SimSaúde

General objective	To promote the integration and interaction of professionals interested in teaching mediated by simulation in the health area through the creation of a SIG-RUTE in the area.
Specific objectives	Disseminate the teaching of good practices in health mediated by simulation; Stimulate exchanges of experience and researches in the area; Support those interested in installation / planning / management / operation of health simulation laboratories.
Target Audience	Undergraduate Students, Resident Students, Specialization Students, Master's or PhD Students, Professors, Higher Level Health Professionals, Technical Level Health Professionals, Community Health Agents, Engineering Professionals, Technology, Health Informatics and Telehealth, Others.
Periodicity	Monthly meetings on Tuesdays in the first week of the month from 12:00 to 1pm.
Technology used	Traditional videoconferencing, two-way audiovisual collaboration: video, audio, data using the H323 standard.
Coordinating institution	Faculty of Medicine from Federal University of Minas Gerais.

RESULTS

The inaugural session was held in August 2016 and the three sessions were attended by 120 listeners from diverse institutions.

The topics covered were: Simulation as educational methodology in the inaugural session, presented by UFMG (Brazil). Simulation in Gynecology and Obstetrics presented by the University of Porto (Portugal) and Communication skills presented by UFMG (Brazil). It is recommended that at the last session of each year an evaluation meeting be held, proposing themes and strategies for the following year.

The figures 1, 2 and 3 present, respectively, the profile of the participants: occupation, area of operation and geographical location of the Institutions.

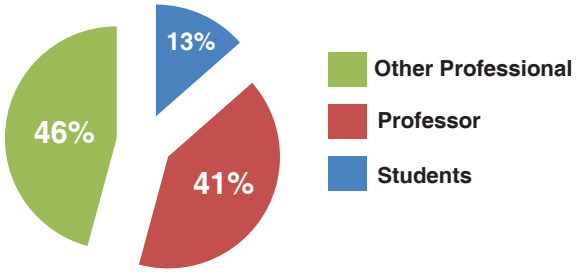

Figure 1: Occupation of the participants.

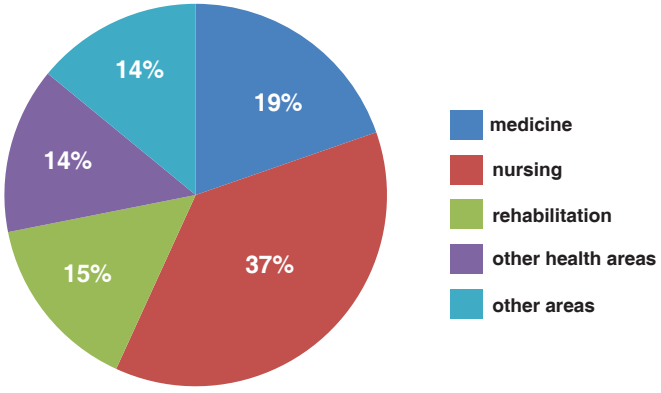

Figure 2: Professional category of the participants.

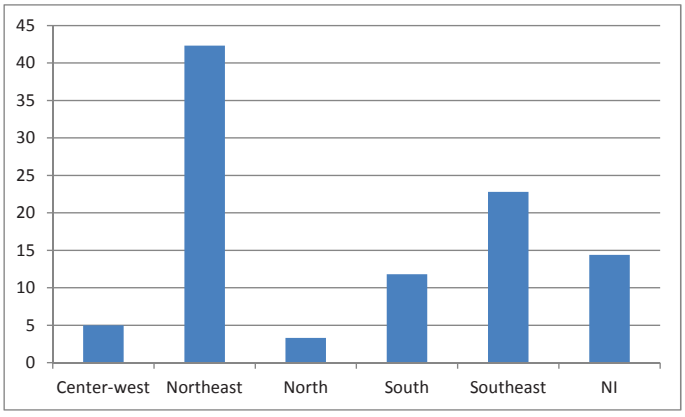

Figure 3: Participants by geographic region.

The analysis of the participants' profile shows that there is still a modest participation of academics in relation to the participation of professors and other professionals. The data also point out the great interest of the nursing area and other health areas in the simulation theme. The participation by region of the country indicates a predominate participation of the northeastern region of the country.

Regarding the degree of the participants' satisfaction, 96% said they were very satisfied and 4% satisfied with the content presented.

DISCUSSION

Brazil is a country of continental dimensions and the information and communication technologies allow that knowledge to be shared without displacement. The teaching and the continuing education based on simulation are a new methodology and the SIG-RUTE (SimSaúde) has allowed the exchange of experiences and dissemination of these new techniques for the university environments and the assistance scenarios. It is possible to find an interface with other special interest groups, such as: Intensive Therapy, Cardiorespiratory Resuscitation, Management. In Brazil there is a Brazilian Association of Simulation in Health (ABRASSIM)[7], created in 2010, with the main objective of aggregating all the professionals who work with simulation or who have an interest in this educational strategy for the teaching and health education and, thus, make Brazil a center of world reference and excellence in simulation. Another objective of the association is to disseminate clinical simulation as a teaching method and tool, helping those who intend to use it in their curricula and institutions to do so in an adequate and viable way, from undergraduate to continuing education. The SIG-SimSaúde coordinators are part of this association and envisage a greater interface as a means of disseminating and supporting the interested professionals to make better use of the simulation. The possibility of interaction via web / videoconference can facilitate the interaction of the various actors involved: Teaching institutions (undergraduate and post-graduate), research and care areas, in order to use this new methodology with distance support.

The American Heart Association (AHA) in the urgency / emergency area has offered in-person courses since 1966. 8 In the years that followed, the AHA and the Resuscitation Councils created the Basic Life Support (SBV) and Advanced Life Support (SAV), adult and pediatric, and the neonatal resuscitation program. The objective was to disseminate and systematize the science of resuscitation and the teaching of emergency cardiac care in several contexts: inside and outside the hospital environment, involving health professionals, lay people with a wide range of occupational experiences. Several measures were proposed and adopted by the International Liaison Committee on Resuscitation (ILCOR), in particular in the teaching of SBV, including the adoption of educational strategies that would allow more time for practical hands-on training and other more appropriate instructional methods, that offer (favorecessem) better performance of the resuscitators, laymen or not, and greater retention of skills needed in CPR[9]. The finding was that not all victims received CPR, and when they received it, the quality of CPR was far from ideal. In this logic[10], the AHA, in 2005, recognized the great variation in the quality of basic and advanced life support, both outside the hospital and in the hospital environment.

In particular, from 2010 onwards, there has been a greater investment in expanding the target audience through the use of information and communication technologies with semi-presential courses, the availability of e-Book and some initiatives regarding distance-monitored teaching[11].

Several topics will still be addressed and we hope the SIG-RUTE SimSaúde will address aspects related to skills in communication with technique, use of basic and advanced mannequins, debriefing technique, among others. There are many possibilities.

For the results shown, the participation is still small. As the videoconferencing occurs on a predetermined schedule and day, it is often difficult for some professionals to participate. The videoconferences are being recorded and made available later, making it difficult to evaluate the real access. Up to now, it has been possible to occur contact among the universities after the videoconference to clarify doubts and this contact is fundamental for the creation of a knowledge network in this new area.

CONCLUSION

The idea of creating this SIG-RUTE arose from a growing demand on improving the knowledge on various aspects of health simulation, ranging from teaching in undergraduate and postgraduate courses to continuing education for health professionals and researches. The topics are diverse and comprehensive: communication skills, difficult news communication, semiology, basic and advanced life support, urgency/emergency, family medicine, evaluation, training and evaluation of team performance, patient safety and education for the health. The simulation is not a substitute for clinical practice, but rather a complement to the training, allowing the student/professional contact with situations that would not always be possible in the clinic, thus making the teaching more uniform for this and more ethical for the patients.

There are several advantages of teaching based on simulation, among them the possibility of training without the patient's exposing, correcting mistakes made, repeating the technique or skill, progressive acquisition of the skills and competences, discussion about the student/professional's performance and the reflection on the difficulties encountered. Another great advantage is the possibility of experiencing situations close to the real before the direct contact with the patient, allowing the reduction of adverse events and risks for the patients. The future perspective for this SIG-RUTE is to create a cooperative network for the exchange of experiences and the encouragement for researches, in order to strengthen the simulation as an instrument of teaching, assessment and continuing education.

Figure 4: Admission Ceremony of the Faculty of Medicine to RUTE, December 2015.

REFERENCES

1. Rede Universitária de Telemedicina. [Citado em 2016 out. 13]. Disponível em: http://rute.rnp.br/.
2. Messina LA, Ribeiro Filho JL, Lopes PRL. RUTE 100: as 100 primerias unidades de telemedicina no Brasil e o impacto da rede Universitária de Telemedicina. Rio de Janeiro: E-papers; 2014.
3. Gaba DM. The future vision of simulation in healthcare. Simul Health. 2007; 2(2): 126-35.
4. Murdoch NL, Bottorff JL, McCullough D. Simulation education approaches to enhance collaborative healthcare: a best practices review. Int J Nurs Educ Scholarsh. 2014; 8(10). Doi: 10.1515/ijnes-2013-0027.
5. Hempel S, Miles JN, Booth MJ, Wang Z, Morton SC, Shekelle PG. Risk of bias: a simulation study of power to detect study-level moderator effects in meta-analysis. Syst Rev. 2013; 28(2):107.
6. Ministério da Educação (BR). Conselho Nacional de Educação. Câmara de Educação Superior Resolução n.4, de 7 de novembro de 2001. Brasília: Diretrizes Curriculares Nacionais para os Cursos de Graduação em Medicina. Diário Oficial da União, 2001. p.38.
7. Associação Brasileira de Simulação em Saúde. [Citado em 2016 set. 12]. Disponível em: http://www.abrassim.com.br
8. Bhanji F, Mancinni ME, Sinz E, Rodgers DL, McNeil MA, Hoadley TA, et al. Education, implementation and teams: 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Circulation. 2010; 122(suppl 3): S920-S933.
9. Hunt EA, Hamilton MF, Eppich WJ. Resuscitation Educational: narrowing the gap between evidence b resuscitation guidelines and performance using best educational practices. Pediatr Clin North Am. 2008; 55:1025-50.
10. American Heart Association. 2005 American Heart Association Guidelines for Cardiopulmonary Resuscitation (CPR) and Emergency Cardiovascular Care (ECC) of Pediatric and neonatal patients: pediatric basic life support. Pediatrics. 2006; 117(5): 989-1004.
11. Mancini ME, Soar J, Bhanji F, Billi JE, Dennett J, Finn J, et al. Part 12 - Education, implementation and teams. 2010 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recomendations. Circulation. 2010; 122: S539-S581.