

ELMO TRAINING: EXPERIENCE IN LOGISTICS AND OPERATION

TREINAMENTOS ELMO: EXPERIÊNCIA NA LOGÍSTICA E OPERACIONALIZAÇÃO

CAPACITACIÓN ELMO: EXPERIENCIA EN LOGÍSTICA Y OPERACIÓN

ABSTRACT

To describe a multidisciplinary experience in the administrative and academic management processes of training for the use and clinical management of the Elmo helmet. Experience report carried out from December 2020 to March 2021, addresses the description of administrative processes and academic management of the suitability for use and clinical management of the Elmo helmet offered by the School of Public Health of Ceará (ESP/CE) 285 health professionals were trained, and currently there is a total of more than 1,400 professionals trained in the Realistic Simulation Center of ESP/CE. In times of pandemic, the institution needed to add to the in-person training and qualification of health professionals and workers in the state of Ceará a modality of distance education to expand the training of multipliers in the context of Elmotherapy. The activity brought important results to fight Covid-19 in the pandemic, promoting training, which continues to this day.

Descriptors: *Administrative Processes of Health Services; COVID-19 Pandemic; Apprenticeship.*

RESUMO

Descrever a experiência multiprofissional nos processos administrativos e de gestão acadêmica do treinamento para uso e manejo clínico do capacete Elmo. Relato de experiência realizado no período de dezembro de 2020 a março de 2021. Aborda a descrição dos processos administrativos e de gestão acadêmica da aptidão para uso e manejo clínico do capacete Elmo ofertado pela Escola de Saúde Pública do Ceará (ESP/CE). Inicialmente, foram treinados 285 profissionais de saúde, sendo que atualmente tem-se mais de 1.400 profissionais capacitados pelo Centro de Simulação Realística da ESP/CE. Em tempos de pandemia, a instituição precisou somar aos treinamentos e capacitações presenciais dos profissionais de saúde e trabalhadores do estado do Ceará, com práticas pedagógicas na modalidade de educação diversificada, com PBL a distância e treinamentos de habilidades a distância, com suporte *online*, para ampliar a formação de multiplicadores no contexto da elmoterapia. A atividade trouxe resultados importantes para o enfrentamento da Covid-19 na pandemia, com a capacitação e formação dos profissionais de saúde e docentes, promovendo a realização de treinamentos, que têm continuidade até os dias atuais.

Descritores: *Processos Administrativos dos Serviços de Saúde; Pandemia COVID-19; Aprendizado.*

RESUMEN

Describir una experiencia multidisciplinar en los procesos de gestión administrativa y académica de la formación para el uso y manejo clínico del casco Elmo. Informe de experiencia realizado de diciembre de 2020 a marzo de 2021, aborda la descripción de los procesos administrativos y gestión académica de la idoneidad para el uso y manejo clínico del casco Elmo ofrecido por la Escuela de Salud Pública de Ceará (ESP/CE). Se capacitaron 285 profesionales de la salud, y actualmente hay un total de más de 1.400 profesionales capacitados en el Centro de Simulación Realista de ESP / CE. En tiempos de pandemia, la institución necesitaba sumar a la capacitación y calificación presencial de los profesionales y trabajadores de la salud en el estado de Ceará una modalidad de educación a distancia para ampliar la formación de multiplicadores en el contexto de la Elmoterapia. La actividad arrojó resultados importantes para combatir el Covid-19 en la pandemia, promoviendo la capacitación, que continúa hasta el día de hoy.

Descritores: *Procesos Administrativos de Servicios de Salud; Pandemia de COVID-19; Aprendizaje.*

Maria Rosenilda Araujo Lira Viana¹
ORCID: 0000-0003-1575-8458

Leticia Kelly Costa Silva¹
ORCID: 0000-0002-6508-7819

Maria Morgana Souza Gomes¹
ORCID: 0000-0002-8451-1347

Cleoneide Paulo Oliveira Pinheiro¹
ORCID: 0000-0003-1784-7446

Leidy Dayane Paiva de Abreu¹
ORCID: 0000-0001-8895-1481

¹ Escola de Saúde Pública do Ceará



<https://doi.org/10.54620/cadsp.v15i2.663>

Autor Correspondente:

Maria Rosenilda Araujo Lira Viana
nilda.viana14@gmail.com

Submetido 25/08/2021

Aceito para Publicação 28/09/2021



INTRODUCTION

Coronavirus was first notified in December 2019 in a group of people residing in the city of Wuhan in southern China. Subsequently, the number of infected patients increased exponentially on this continent¹. With the arrival of the Covid-19 pandemic, restrictive measures related to physical contact were implemented in several countries, being limited to conducting health surveys with face-to-face interviews².

The distance in family life, the uncertainty about the disease, the substantial changes in the socioeconomic context and the lack of control over several aspects, which were previously controlled and organized in one's own life, have caused damage to physical and mental health³.

As a result, at the same time that there was an increase in the share of disadvantaged workers excluded from the labor market, it was necessary to adapt to the remote occupation of those who had favorable conditions to remain, and the home office, in the context of the pandemic, was essential for the new reality of work processes⁴. In addition to these new behaviors, it was also necessary to accentuate education in its different proposals, such as permanent education. This practice began in Latin America with the perception of inadequacy in professional training, and is characterized by involving technical skills aimed at productive performance with the objective of including knowledge, values and a commitment to political, ethical and social aspects⁵.

Allied to the aforementioned pedagogical practice, digital media have the potential to disseminate popular health education to produce evidence that makes it possible to disseminate political practices that are part of health education⁶. Ongoing training must be in different places, promoting inquiries to enable the way to act, regarding teamwork, quality in individual and collective care⁷. The Elmo helmet is a technological innovation that favors a better breathing pattern, being positioned on the head, offering comfort and safety, having significant importance for hospital care today⁸.

The creation of Ceará became of public relevance for saving lives, avoiding the invasive procedure of orotracheal intubation and to meet the demand from other states for the helmet, in addition to adapting to the pandemic context⁹.

To meet the mission of having facilitating health professionals in the State of Ceará, and expanding the qualification of health services, with the use of hard Elmo technology, the School of Public Health has a sector (CEDES) responsible for coordinating the process of conception, review and implementation of the

Pedagogical Political Project (PPP), focusing on a competency matrix that integrates cognitive, psychomotor and attitudinal skills in the areas of health education.

The strategies of the administrative functions of the cyberspace domains are vulnerabilities and challenges that were introduced in the pandemic, requiring dynamics and logistics of this domain to continuously operationalize the administration of the qualifications and training carried out in the pandemic¹⁰. Therefore, this work aims to describe the multidisciplinary experience in administrative processes and academic management of training for the use and clinical management of the Elmo helmet.

METHODS

This is an experience report that, according to Del-Masso, Cotta and Santos¹⁰, consists of a study that describes the aspects experienced by an author or a group of authors, which presents reflections on the experiences of professional life. Thus, this experience report addresses the description of administrative processes and academic management of training and qualifications for the use and clinical management of the Elmo helmet, offered by the Escola de Saúde Pública (ESP).

The experience was developed from December 2020 to March 2021 by the facilitators of the Educational Development Center (CEDES) in partnership with the Scientific Research Center (CENIC) of ESP/CE, based on practical narratives and experiences in administrative processes and academic management of Elmo training. Figure 1 below illustrates the reach of the technology as early as 2021.

Figura 1 – Training for the use and clinical handling of the Elmo helmet, Fortaleza, Ceará, 2021.



Source – official website of the School of Public Health of Ceará.

In order to access training on the use of Elmo, at the beginning, health institutions sent a list of professionals who were contemplated and involved in the front line of the clinical management of patients with

Covid-19. Subsequently, entries were made through the Elmo website (<https://sus.ce.gov.br/elmo/>) and, through the CRM academic platform, registered in the Single Academic Management System (SAGU) for the purpose of issuing declaration of participation. Confirmation of participants was carried out through calls or e-mail from interested professionals registered on the site. CEDES was responsible for the training infrastructure, training facilitators and carrying out the training through the virtual platform, in addition to training in clinical skills using the educational strategy of realistic simulation.

The trainings with the Elmo helmet remain until the present day. This program is called Helm Management Training in Patients with Hypoxemic Acute Respiratory Failure in Covid-19 patients. Currently, the use of Elmo extends to other diseases that progress to the same hypoxemic clinical condition.

Namely, the training consists of three stages: at first, an institutional video is exposed; in the second, the training is performed and, in the third, the debriefing takes place, which is defined with questions directed to professionals who performed the practice on the importance of qualification for assistance. The training takes place at the Realistic Simulation Center of ESP/CE. The space allows for the development of clinical skills for using the Elmo helmet in a simulated environment.

RESULTS

The administration responsible for implementing the project had to adapt to the new educational strategies, with the training, initially of 285 health professionals, and currently there is a total of more than 1,400 professionals trained in the Realistic Simulation Center of ESP/CE. These professionals were trained by the School of Public Health (ESP) in public hospitals free of charge and in private hospitals with a cost for training. In addition to other states where training practices were held, including: São Paulo, Manaus and Maranhão.

In times of pandemic, the institution needed to add to the training and in-person training of health professionals and workers in the state of Ceará, the modality of distance education, to expand the training of multipliers in the context of Elmotherapy.

Trainings linked to the School of Public Health are held on Tuesdays and Thursdays, in person, and on Wednesdays and Fridays, virtually.

For this experience, we had the support of administrative processes and academic management to carry out the qualification for healthcare professionals in the use and clinical management of the Elmo helmet.

Health professionals, researchers, managers, academics and others interested in the subject participated.

The in-person trainings were held at the Center for Realistic Simulation of the School of Public Health of Ceará Paulo Marcelo Martins Rodrigues (ESP/CE), linked to the Health Department of the State of Ceará (SESA), covering all stages of training to promote advancement in hospital care.

Despite the difficulties, ESP/CE has been renewing and preparing itself in the logistics and administrative processes for the operationalization of training on the use of helmets, preparing health professionals from the state of Ceará to work in the front line of care for patients with respiratory failure hypoxemic.

DISCUSSION

Adaptations in the clinical and educational environment were necessary and urgent to maintain the excellence of care, the safety of the team and the patient in dealing with Covid-19¹¹, with the logistical and operational structuring being important to carry out training in times of pandemic.

Studies that address the contribution of Telehealth to fighting Covid-19 indicate how changes in the tools for health care and education have undergone changes in fighting the new coronavirus pandemic and how these potential strategies are important to contribute to contingency plans in the country¹².

Considering the pandemic context, digital technology brought education and communication closer to public health in the pandemic, with social media being widely used by society, updating the proposals implemented by the government in real time and clarifying user's doubts¹².

The Covid-19 pandemic highlighted the need to combine innovation and technology with adaptations in teaching strategies, with active methodologies centered on the student, in questioning and simulations, and skills training being valued¹¹.

It is also worth mentioning the creation of networks aimed at providing technical support with the aim of training personnel through workshops, dissemination of guidelines, sharing of technical updates and the development of case studies as a tactic for training professionals¹³.

Teleworking, according to a study designed to investigate the reality of this type of work in the pandemic scenario, despite facing obstacles regarding the expansion of computerized infrastructure, limitations that also appear in this written experience report, is associated with productivity gains¹⁴.

However, even in the face of these challenges, even so, it is admitted that governments protected by the administration of processes and in partnership with institutions that promote science have joined efforts in scientific research, seeking answers not only to these deficiencies and bureaucratic issues of administration, but also using scientific research as a true guide for public health actions in the pandemic¹⁵.

Studies show that the realistic simulation strategy in health brings advantages such as facilitating knowledge, self-confidence and accuracy, approaching reality, stimulating clinical reasoning and the development of skills and competences, in addition to strengthening theory and practice in the performance scenario of health professionals¹⁶.

However, more studies need to be carried out and experienced about this operational logistical support, which is so fundamental for the implementation and operation of training based on simulations.

FINAL CONSIDERATIONS

The work brought results from the actions carried out by the Center for Educational Development in Health, through experience and experience in logistics and training operations. The coordinated activity brought important results to confront Covid-19 in the pandemic, promoting training, which continues to this day. It is also important to emphasize the support of institutions and companies that showed interest in learning for the dissemination of knowledge and supported the development of research and further training.

Therefore, the actions carried out demonstrated the relevance of the administrative processes of this center, which proves to be necessary for the execution of support activities, in order to make the assistance processes feasible. Therefore, it is important to emphasize the efficiency of management processes. Despite the setbacks, the actions and strategies in health education were maintained.

The study is limited to the lack of a digital platform. The development of operationalization strategies to attract and enroll health professionals is suggested. It is also highlighted the incomplete record of information from trained professionals and the difficulties of sending information to register these professionals in training.

REFERENCES

1. Duarte MLC, et al. Enfermagem e saúde mental: uma reflexão em meio à pandemia de coronavírus. *Rev Gaúcha Enferm.* 2021;42.
2. Ali SH, Foreman J, Capasso A, Jones AM, To-zan Y, Di Clemente RJ. Social media as a re-cruitment platform for a nationwide online survey of COVID-19 knowledge, beliefs, and practices in the United States: methodology and feasibility analysis. *BMC Med Res Meth-odol.* 2020;20:116.
3. Mukhtar S. Psychological health during the coronavirus disease 2019 pandemic outbreak. *Int J Soc Psychiatry.* 2020;66:512-6.
4. Guimarães EMP, Martin SH, Rabelo FCP. Educação Permanente em Saúde: Reflexões e desafios. *Cienc Enferm.* 2010;16(2):25-33.
5. Lemos AHC, et al. Mulheres em Home Office durante a Pandemia da Covid-19 e as Configurações do Conflito Trabalho-Família. *Rev Adm Empres.* 2020;60(6). doi <https://doi.org/10.1590/S0034-75902020060>.
6. França T, et al. As mídias e as plataformas digitais no campo da Educação Permanente em Saúde: debates e propostas. *Saúde Debate.* 2019;43(1):106-15.
7. Sá AMGN, et al. Contribuições da Educação Permanente para Qualificação da Assistência de Enfermagem em um Hospital Público. *R Bras Ciên Saúde.* 2018;22(1):87-94.
8. Holanda MA, Pinheiro BV. Pandemia por COVID-19 e ventilação mecânica: enfrentando o presente, desenhando o futuro. *J Bras Pneumol.* 2020;46(4):e20200282.
9. Ceará. Governo do Estado do Ceará. Ceará Inovador. Fortaleza: Palácio da Abolição; 2021.
10. Del-Masso MCS, Cotta MA de C, Santos MAP. Ética em Pesquisa Científica: conceitos e finalidades. *Acervo Digit.* 2007;1-16.
11. Albuquerque NLS de. Planejamento operacional durante a pandemia de Covid-19: comparação entre recomendações da Organização Mundial da Saúde e o Plano de Contingência Nacional. *Cogitare Enferm.* 2020;25: e72659.
12. Rocha CTM, et al. O teletrabalho: conceituação e questões para análise. *Cad. EBAPE.BR.* 2018;16(1).
13. Medeiros BP, et al. O uso do ciberespaço pela administração pública na pandemia da COVID-19: diagnósticos e vulnerabilidades. *Rev Adm Pública.* 2020;54(4). doi <https://doi.org/10.1590/0034-761220200207>.
14. Caetano R, et al. Desafios e oportunidades para telessaúde em tempos da pandemia pela COVID-19: uma reflexão sobre os espaços e iniciativas no contexto brasileiro. *Cad Saúde Pública.* 2020;36.
15. Oliveira WK, et al. Como o Brasil pode deter a COVID-19. *Epidemiol Serv Saúde.* 2020;29(2):e2020044.
16. Domingues I, et al. Contribuições da simulação realística no ensino-aprendizagem da enfermagem: revisão integrativa. *Research, Society and Development.* 2021;10(2):1-9. doi <http://dx.doi.org/10.33448/rsd-v10i2.12841>.