



Mediated training by bedside supervised practice for nurses during the COVID-19 pandemic: an observational study

Treinamento mediado pela prática supervisionada à beira-leito para enfermeiros durante a pandemia de COVID-19: estudo observacional

Capacitación mediada por la práctica supervisada a pie de cama para enfermeros durante la pandemia de COVID-19: estudio observacional

Simone Cristina Azevedo Silva¹

Selma Tavares Valério¹

Mariana Lucas da Rocha Cunha^{1,2}

1. Hospital Israelita Albert Einstein. São Paulo, SP, Brasil.

2. Faculdade Israelita de Ciências da Saúde Albert Einstein, Hospital Israelita Albert Einstein. São Paulo, SP, Brasil

ABSTRACT

Objective: to describe a strategy of mediated training by bedside supervised practice for nurses during the COVID-19 pandemic and to determine nurses' perception about contribution of bedside training for the acquisition of knowledge and skills for healthcare practice in critical care settings. **Methods:** this was an observational, longitudinal, retrospective and descriptive study that used a quantitative approach, conducted at a large private health care facility in the city of São Paulo, Brazil. The data collected refer to the period from April to June 2021. The research was approved by the Research Ethics Committee of *Hospital Israelita Albert Einstein*, under Protocol 5.423.393. Ten procedures were selected for supervision, such as tracheal aspiration, nasogastric tube, venipuncture, donning, dressing and equipment handling. Data obtained were analyzed using descriptive analyses and statistical tests. **Results:** of the participants (72), 87.7% were women with mean age of 33 years and their mean work experience was 9 months (50%). Initially, professionals participated in the standard 26-hour institutional training and, later, in supervised practice-mediated training. The mean time per procedure was 45 minutes. The median proficiency in eight of the procedures was eight. Most professionals rated themselves as confident (98.9%) and satisfied with the training (99.4%). **Conclusion and implications for practice:** the training enabled a structured process of identification and monitoring of care practice, allowing for an effective strategy to provide prepared professionals who work safely.

Keywords: Clinical Competence; Coronavirus; Education, continuing; Nursing; Pandemics.

RESUMO

Objetivos: descrever estratégia de treinamento mediado pela prática supervisionada à beira-leito para enfermeiros na pandemia de COVID-19 e identificar a percepção dos enfermeiros quanto à contribuição do treinamento na aquisição de conhecimentos e habilidades para o atendimento ao paciente crítico. **Método:** estudo observacional, longitudinal, retrospectivo, descritivo e quantitativo, realizado em hospital de grande porte (São Paulo). Dados foram coletados no primeiro semestre de 2021 após aprovação pelo Comitê de Ética em Pesquisa do Hospital Israelita Albert Einstein, sob Parecer 5.423.393. Foram selecionados dez procedimentos para supervisão, como aspiração traqueal, sondagem nasogástrica, punção venosa, paramentação, curativo e manuseio de equipamentos. **Resultados:** dos 72 participantes, 87,5% eram mulheres, com idade e tempo médio de atuação de 33 anos a nove meses, respectivamente. Inicialmente, o profissional participou do treinamento institucional padrão de 26 horas e, posteriormente, ao mediado pela prática supervisionada. O tempo médio por procedimento foi de 45 minutos. A mediana de proficiência em oito dos procedimentos foi oito. A maioria dos profissionais se autoavaliou como confiante (98,9%) e satisfeitos com o treinamento (99,4%). **Conclusão e implicações para a prática:** o treinamento possibilitou um processo estruturado de identificação e acompanhamento da prática assistencial, permitindo uma estratégia efetiva para prover profissionais preparados e atuando com segurança.

Palavras-chave: Competência Clínica; Coronavirus; Educação Continuada; Enfermagem; Pandemias.

RESUMEN

Objetivos: describir estrategia de formación mediada por la práctica supervisada de cabecera para enfermeros durante la pandemia de COVID -19 y identificar la percepción de los enfermeros sobre la contribución de la formación de cabecera en la adquisición de conocimientos y habilidades para la práctica asistencial en la atención a pacientes críticos. **Método:** estudio observacional de carácter longitudinal, retrospectivo y descriptivo, con enfoque cuantitativo, realizado en un hospital privado de gran porte en São Paulo. Los datos recopilados se refieren al período de abril a junio de 2021. La investigación fue aprobada por el por el Comité de Ética en Investigación del Hospital Israelita Albert Einstein, bajo el Dictamen 5.423.393. Se seleccionaron diez procedimientos para supervisión, como aspiración traqueal, sonda nasogástrica, venopunción, batas, vendajes y manejo de equipos. El análisis de los datos se basó en estadística descriptiva y pruebas estadísticas. **Resultado:** de los 72 participantes, el 87,5% era mujer, de 33 años de edad promedio y un tiempo promedio de nueve meses de trabajo (50%). Inicialmente, los profesionales participaron de la formación institucional estándar de 26 horas y, posteriormente, de la formación mediada por la práctica supervisada. El tiempo medio por procedimiento fue de 45 minutos. La mediana de competencia en ocho de los procedimientos fue ocho. La mayoría de los profesionales se calificaron como confiados (98,9%) y satisfechos con la formación (99,4%). **Conclusión e implicaciones para la práctica:** la capacitación permitió un proceso estructurado de identificación y seguimiento de la práctica asistencial, posibilitando una estrategia eficaz para brindar profesionales preparados que trabajen con seguridad.

Palabras clave: Competencia Clínica; Coronavirus; Educación Continua; Enfermería; Pandemias.

Corresponding author:

Simone Cristina Azevedo Silva.
E-mail: simone.csilva@einstein.br

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INTRODUCTION

The workforce quality is a critical success factor for any organization. In the health sector, this requirement is accentuated because the activity requires professionals to provide direct assistance to individuals. In this regard, quality in health is characterized by knowledge, values, norms, attitudes and necessary skills that will generate safe and responsible care, if properly put into practice by nurses, doctors, physiotherapists, nutritionists, among other professionals, that make up human resources in the health system.¹

Also noteworthy is the complexity of the context in which health professionals work, such as nurses, since work is characterized by a process of direct interaction with the patient and the multidisciplinary team. Moreover, there is a demand for specific knowledge about what patient care involves, including the increasing and frequent use of new technologies, diseases or treatments. The nature of the service requires constant updates institutionally guided and monitored by practices, protocols and essential knowledge aimed at the quality of care provided to patients and their safety.¹

Professionals with technical skills and relevant socio-emotional skills, such as communication, leadership, teamwork, in sufficient numbers, inserted in units where they are necessary (number of patients and degree of complexity), motivated and supported, are essential for the management and provision of competent health services. Professionals' work, in turn, raises institutional or legal policies and practices that define the number of employees to allocate their qualifications and the working conditions in each context of health care.²

However, in public health emergency situations of international importance, as pandemics are understood, the logic of structuring health services is directly affected. The Provisional Measure (PM 927/2020) is an example that made labor laws more flexible, readjusting the relationship between work shift and nursing rest hours to respond to the pandemic.²

The COVID-19 pandemic, since its inception in 2020, has triggered a high demand for qualified health professionals to work in Intensive Care Units (ICUs), since many patients needed to be hospitalized in these units for long periods. In 2019, a survey by the Federal Nursing Council (COFEn) should be highlighted, demonstrating that the deficit of nurses and nursing technicians specialized in ICUs in Brazil was around 17,000 professionals.³

The pandemic only made this situation worse by intensifying worker absenteeism and illness, in addition to physical and psychological exhaustion, work overload and lack of individual protection resources or inputs for patient care.² From this context, aspects related to the fear of contamination also emerge, reinforced by the lack of knowledge about a virus with new characteristics, a little-known disease, with limited treatment and critical prognosis. If acting and direct contact with infected patients were not enough, it was necessary to broaden the vision beyond the technical work performed by these professionals, considering the psychological and emotional aspects, such as

the fear of falling ill and dying or of contaminating their family members.⁴⁻⁶

In Brazil, from May 2020 to May 2021, the availability of ICU beds increased by about 150%, directing new circumstances for the health system to respond, such as construction of field hospitals, adaptation of common beds to intensive care beds, emergency hiring of professionals with or without experience, change of work schedules, acquisition of materials and medicines in large quantities and in a short period of time, among others. The rapid and excessive increase in capacity, in terms of beds, overloaded the entire system. The overload was consolidated by the clinical severity that patients presented, progressive worsening of the condition, increased length of hospitalization, slow recovery, greater need for material resources, such as respirators and medicines, and professionals.⁷

In this context, many health organizations had to adapt and convert clinical beds to expand their capacity to care for critically ill patients, but, even if there were beds, there were not qualified professionals in the same proportion as the demand.⁸

This scenario led to a significant increase in the demand for health professionals, which led to a shortage of professionals with specific experience in caring for seriously ill individuals. The allocation or reallocation of health workers, especially nurses, to ICUs was a decisive contingency strategy during the pandemic.⁹

At each reallocation, however, care nurses needed to learn how the unit works, meet the population of patients they would assist and integrate into the new work team, and this required time and initiative (theoretical and practical knowledge, peer and institutional support, among others)). Turnover also interferes with the care provided, as specialized nurses are not always replaced by professionals with the same level of clinical competence.⁹⁻¹⁰ It should be noted that the scenario promoted by the pandemic also instigated the turnover of these professionals, physically and emotionally exhausted and, consequently, requiring forceful action from the training and development area of health institutions. In a cascade effect, in turn, the institutions had to absorb new teaching-learning strategies, considering the scenario of the shortage of qualified workforce according to the demand of critical patients as well as being able to monitor the dynamics of the knowledge required to facing the scenario that presented itself.

The quality of health service provision is directly influenced by its professionals' work. The nature of this activity requires constant updates on practices, protocols and essential knowledge aimed at quality and patient safety.¹¹

Among the strategies adopted in health services to maintain the quality and safety of both professionals and patients, in-service training stands out. Training is essential for the growth, development and protection of health professionals as well as for improving patient outcomes. In-service training aims to maintain good practice and transfer knowledge to practice, consequently improving quality of care, improving health outcomes and increasing professional confidence and satisfaction.¹²

If, on the one hand, health organizations have mechanisms for predictability and dimensioning of their resources, on the other hand, emergency situations can directly impact the supply of professionals in the market, the recruitment, selection and training process, due to the need for qualified workforce in absolutely agile time for immediate and safe action. It is taken into account, in this sense, that the unprecedented and emergency scenario triggered by the new coronavirus SARS-CoV-2 required the accelerated preparation of health professionals to work in care processes and protocols, in order to ensure patient and employee safety and minimize risks and care procedures.¹³

In this regard, admission training (AT) has been developed with the purpose of preparing team professionals to provide care based on institutional guidelines, aligning them with the mission, vision, values and philosophy of each institution. It is, therefore, a programmed activity in stages, in which individuals develop skills and reach target competences made possible by guided practical performance and regular feedback. It allows updating on protocols, technical procedures and hard skills, permeated by quality and safety, by targeting new guidelines and best practices, in addition to improving soft skills and team motivation.¹³

The proposal for training mediated by supervised bedside practice was planned and implemented, based on the theoretical framework of student-centered, experiential learning and the model for developing skills for nurses proposed by Patricia Benner. This model addresses the concept that the understanding and competence of patient care are developed by nurses based on a substantial educational foundation and solidified by experiences throughout their training.¹⁴

Given the above, this study aimed to: describe a training strategy mediated by supervised bedside practice for nurses in the COVID-19 pandemic; identify the perception of nurses regarding the contribution of training in the acquisition of knowledge and skills for critical patient care.

METHOD

This is a longitudinal, retrospective and descriptive observational study with a quantitative approach. It was carried out in a large, non-profit hospital that is part of the private and public system in health, teaching and education, consulting, research, innovation and social responsibility.

The hospital has 686 beds in the private network, 38 for the ICU. The nursing team represents 33% of the workforce, with 2,016 nurses. To care for critical patients during the COVID-19 pandemic, beds in the medical-surgical and semi-intensive clinic were converted into intensive care beds. Around 100 beds were equipped and teams were hired to deal with this scenario.

The study sample, consisting of convenience, included 72 nurses who were newly admitted or relocated to work in the ICU, from April to June 2021, and who fully complied with the stages of health training. They acted in the contingency plan for the care of critical patients affected by COVID-19.

The learning journey of the newly admitted employee at the studied hospital begins with nursing AT, an in-service training program whose purposes are to promote the exchange of knowledge, practice of technical skills, updates on protocols and institutional policies, aiming at providing assistance with quality and safety, and develop socio-emotional and behavioral skills. This program is based on learning strategies based on active and collaborative methods in a hybrid format. Traditionally, it is complemented by the professional nursing path, totaling 54 hours of in-service training. The employee must complete this journey within three months of starting at the institution.

During the COVID-19 pandemic, however, the corporate education team at the studied hospital presented a new proposal for in-service training: *supervised practice at the bedside for the development of technical skills*, thus meeting the emergency demand for professionals to critical patient care.

In this proposal, the newly admitted or reallocated nurse to work in the ICU was trained at the bedside by an instructor nurse with experience in critical patient care performing specific procedures such as tracheal aspiration, passing a nasogastric tube, collecting tests, among others. Before performing each procedure, the instructor asked the trainee if he felt able to perform such a procedure. If so, the procedure was performed under supervision.

After performing the procedure, the instructor nurse responsible for monitoring recorded the following information on a mobile device: on a scale of 0 to 10, what is the employee's proficiency in the procedure performed?

In addition to this, the accompanied nurse should answer the following questions: before the procedure, do you feel confident to perform this procedure? After the procedure, did this supervised practice help with performing the procedure? The records were completed in an online form, developed to indicate the level of proficiency reported according to nurses' perception.

Based on the competence development model for nurses proposed by Patricia Benner¹⁴ – student-centered learning, experiential learning –, the in-service training proposal was designed considering that each individual has their own personality, beliefs, facilities and difficulties, in addition to different experiences and skills, which influence the way information is assimilated as well as skills are developed.

Learning based on the real work context consolidates the development of knowledge, skills and attitudes, when supervised by trained and qualified professionals for the learning process. Similarly, professional development takes place, in addition to observation, through practical experience and, if necessary, with the collaboration of peers.¹⁵

Information on training mediated by supervised bedside practice was retrospectively collected using a spreadsheet derived from the database of the area of care training, support and auditing hosted on Microsoft® OneDrive. The database was created based on the records of both the professional in training and the instructor nurse who monitored and guided supervised practice at the bedside. Data were extracted respecting

professionals' confidentiality. It should be noted that the ethical precepts of Resolution 466 of 2012 were respected, and data collection took place after approval by the Research Ethics Committee of *Hospital Israelita Albert Einstein* (CEPHIAE), under Opinion 5,423,393.

Initially, data were described considering the mean, standard deviation, minimum and maximum, median and quartiles for quantitative variables. For qualitative variables, frequency tables were considered. Graphic analyzes were also performed to assist in the interpretation of results.¹⁶

To measure the correlation between the quantitative variables and the professionals' proficiency in relation to the procedures, Pearson's or Spearman's correlation tests were adopted, depending on the characteristic of their arrangement. To compare the groups of type of position and proficiency of professionals, Student's t test or Mann-Whitney test was used, also depending on the characteristic of their arrangement.¹⁶⁻¹⁷

The normality checks of the variables were performed using the Shapiro-Wilk test.¹⁸ The significance level adopted for these analyzes was 5%. The analyzes were performed in the computational language R, version 4.1.1.

RESULTS

The sample was composed by convenience with 72 participants, the majority (63; 87.5%) women, with a mean age of 33 years (SD = 7.08), ranging between 22 and 53 years. As for work experience, information was available for 65 participants, and the median was three years, 1st quartile equal to two years and 3rd quartile equal to three years, ranging from one to 11 years.

The median of participants' job tenure at the institution was nine months, 1st quartile of 4.5 and 3rd quartile of ten months, ranging from one to 84 months. Of the 72 participants, most were recently hired (55; 76.4%). The sample characteristics are presented in Table 1.

Bedside supervised practice-mediated training for nurses

The training methodology mediated by supervised bedside practice took place while professionals performed their work activities, under the supervision of an instructor nurse. The objective was to expand the set of skills and guarantee team support and qualification, based on the premises of safety and quality for patients and employees, based on institutional protocols.

Table 1. Sample characterization (n = 72)

	n (%)
Participant's gender	
Female	63 (87.5)
Male	9 (12.5)
Participant's age	
Mean (SD*)	33 (7.08)
Minimum – Maximum	22 – 53
Median [1 st ; 3 rd quartile]	32.5 [27; 37.5]
Time (years) since the participant graduated (n = 65)	
Mean (SD)	4.5 (3.88)
Minimum – Maximum	0 – 18
Median [1st; 3rd quartile]	3 [2; 5]
Time in months of participant participation	
Mean (SD)	10 (11.35)
Minimum – Maximum	1 - 84
Median [1st; 3rd quartile]	9 [4.5; 10]
Hiring type	
Relocated	17 (23.6)
Newly hired	55 (76.4)

* SD = standard deviation.

In bold, the most appropriate descriptive measures are highlighted according to variable characteristic.

Source: The author, 2022.

On the occasion, nursing professionals to be instructors of bedside practice were identified and selected considering that they worked or worked at the institution, with expertise and experience in critical patient care combined with essential skills to facilitate learning, such as technical and practical ability, communication, student focus, teamwork, innovation and flexibility. Professionals with knowledge, performance and technical reference in the area of expertise were recruited, thus being recognized by the immediate manager and naturally legitimized by the team in the process of learning and integrating new employees.

Specific themes and procedures were listed for bedside practice, taking into account their frequency and relevance. It should be noted that, due to the frequency in changing protocols and information on the management of infected patients during the pandemic period, there was a need for constant training also of professionals considered as instructors. Moreover, it was necessary for them to recognize the units in which they would carry out the follow-ups and a brief period for adaptation and alignment of routines. This process and the training were focused on essential topics, protocols and institutional processes, care practices and feedback models.

The process of communication and follow-up between the training team and professional instructors was maintained frequently, with the aim of updating, discussing cases based on the follow-ups carried out and proposals for continuous improvement of the model.

At first, the newly hired professional and the relocated professional were submitted to a 26-hour standard institutional training (in three days). Subsequently, due to the emergency need to be allocated to critical patient areas, they were supervised by an instructor nurse with experience in critical patient care, qualified for this bedside training strategy in the execution of specific procedures.

When asked about safety for carrying out the procedure in the training process, if the professional replied that they did not feel safe, the instructor would review the steps and necessary materials, and the trainee was questioned a second time: do you feel confident to perform this procedure? If so, they performed the procedure followed by the instructor nurse. If the answer was negative again, the trainee nurse followed another professional in carrying out the procedure. When the professional supervised by the instructor performed the procedure, they received, at the end, a proficiency score and feedback. Below seven, they were again submitted to the supervised training process.

Furthermore, complementary resources and channels were used, such as instructional materials through videos or announcements related to health, well-being and psychological safety for frontline work, in addition to information and technical training, providing security and support for new collaborators.

Nurses' perception of bedside training contribution

Nurses' perception regarding the contribution of training needs to be contextualized based on the observations of 371 executions of procedures performed in the period covered by the study and the assessed proficiency. The mean time between supervision and completion of the procedure was estimated at 45 minutes.

Regarding professional proficiency, Figure 1 illustrates the arrangement by procedure, and the dark vertical line represents the median. Handling the infusion pump and passing a nasogastric tube were the procedures with the highest median proficiency, 8.5 and 8.1, respectively. In the other procedures, proficiency medians were equal to eight.

Regarding the perception of safety for performing the procedure, most professionals rated themselves as confident (367; 98.9%). Regarding the perception if a supervised practice helped in the execution of a procedure, it was possible to identify that almost all identified themselves as favorable to the training (369; 99.4%).

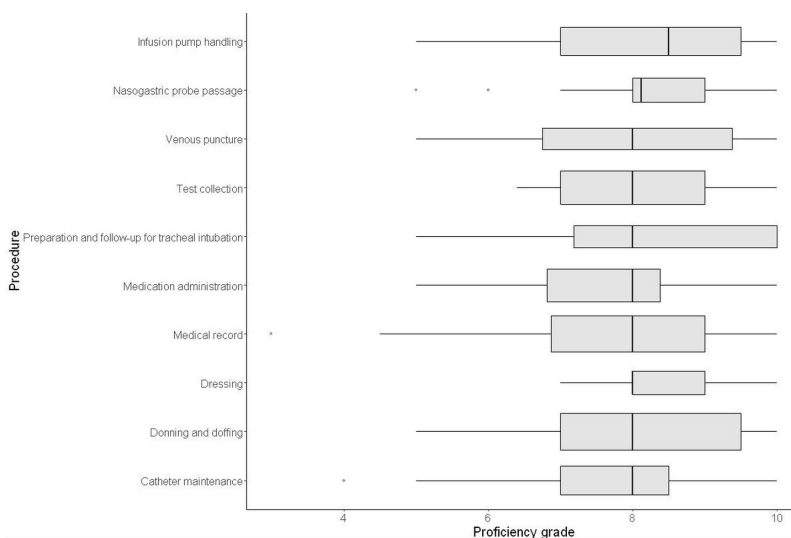


Figure 1. Graphic of the arrangement of proficiency scores (by procedure)
Source: The author, 2022.

DISCUSSION

In the present study, most professionals were women, which is similar to data on gender representation of the nursing workforce. From their precursors, such as Florence Nightingale in Europe and Anna Nery in Brazil, to the present day, they constitute 85% of the workforce in the area in Brazil.¹⁹

With regard to the mean age of the study professionals, the sample is similar to the Brazilian reality regarding the age range of professional nurses (52%) up to 35 years old.²⁰ Approximately half of the participating professionals had up to nine months of experience at the institution, most of whom were recent graduates. In this case, novice nurses enter the institution with skills exercised only in the academic training environment, this was their first field of professional practice.

The literature points to a mismatch between the needs of the labor market and undergraduate students in nursing with regard to training for care in a critical environment. In addition, new graduates are impregnated with negative feelings of fear and lack of confidence resulting from inexperience.²¹ The supervised bedside training strategy was perceived as positive by the nurses who participated in the study.

Given the emergency moment, unavailability of professionals and high occupancy of beds by critical patients, the need for immediate action became urgent to meet the demand of the areas. Having the opportunity to consolidate knowledge and continuous learning at the bedside is important in professional development, in addition to providing a barrier to damage to care practice. This scenario reinforced that, the greater the absence of qualification, the more vulnerable the professionals will be, increasing the risk in the exercise of activities.² Bedside training has the potential to reduce the risks of adverse events for both the patient and the professional.

On the other hand, the literature reinforces that continuous re-education and training, in situations of limited knowledge about coronavirus and its repercussions, was able to increase professionals' sense of confidence.²² It is possible to infer that bedside training positively influenced professionals' perception of safety in the execution of procedures in critical patient care.

A study in China identified that in critical situations, knowledge is essential in motivating care, but above all, to support preventive beliefs, which leads to appropriate practice. Moreover, the study concluded that training needs to consider, among other aspects, professionals' previous experience.²³ In the present study, the training proposal aimed to fill the knowledge gap or little experience in the management of critically ill patients.

Proposing a new training strategy was beneficial when considering that professionals did not have practical experience in caring for critically ill patients, in addition to the relatively short work experience at the institution itself, which naturally limits the acquisition of fundamental elements of the organizational culture. Furthermore, the emergency situation demanded that more professionals promptly take over their jobs, acting on the front line in response to patients' high demand and criticality.

Similarly, these results point to what the literature has already identified in an analysis carried out in a large general state hospital in northeastern Brazil.²⁴

The need for an effective and faster training methodology was confirmed by another study that highlighted the Federal Nursing Council (COFEN) strategies to guarantee a minimum number of professionals in overcrowded units with critical patients resulting from a disease whose knowledge and repercussions were still under construction.²

The bedside training strategy was also important due to the need to update professionals due to constant changes in the clinical protocol for COVID-19 management. In the institution studied, in that period alone, 36 updates were put into practice, which directly implied new information, behaviors and practices to be incorporated by frontline professionals, reinforced by nurses at the bedside.

In Brazil, on January 22, 2020, the Emergency Operations Center (COE COVID-19) was activated for the new coronavirus SARS-CoV-2, resulting from the Brazilian National Plan of Response to Emergencies in Public Health of the Ministry of Health. The protocol brings together guidelines for health professionals in the identification, notification, management of suspected cases of human infection and informs about adjustments resulting from practical use and changes in the epidemiological scenario resulting from advances in knowledge about the disease.²⁵

The analysis of supervised procedures revealed relevant information, such as the handling of an infusion pump, which was indicated with high proficiency, according to the perception of the trainees. Due to the unprecedented demand, the professional needed to know how to handle six different types of this equipment in the institution. The inappropriate use of the infusion pump is naturally associated with professionals' lack of knowledge about its operation, among other variables of the environment and the multidisciplinary team. The pandemic scenario accentuated an issue that was already present in the face of the variety of infusion pump manufacturers and models that can lead to errors in its operation.⁷

A study that presented the experience of reorganizing a health service during the COVID pandemic revealed that the acquisition of new equipment and supplies, changes in care processes and physical structure of the units required intense and effective training to minimize risks to care. It should be noted that the training strategy of the aforementioned service was carried out in a traditional way during working hours.²⁶ The results of this study corroborate this data.

Most of the professionals in this study revealed confidence in carrying out the procedures and perceived supervised practice as an effective learning strategy. Bedside learning is an innovative and favorable option for transferring theoretical knowledge to practical application, especially in situations where time and a shortage of professionals are critical.

At the same time, in follow-up scenarios for students in the field of internship, for example, the figure of the nurse instructor, be it professor, preceptor or tutor, promotes the development of clinical competence through the role of facilitator of the learning process.

This follow-up, therefore, enables the development of autonomy, proactivity, self-confidence, security, encouraging the permanent construction of knowledge.¹⁵ Similarly, in this training experience, instructor nurses played the role of facilitator, given the context of fear and insecurity that marked this situation.

The study participants had common points regarding the lack of previous practical experience for critical patient care; therefore, it is inferred from this condition, the possible insecurity to perform procedures in the critical environment. The literature indicates, similarly, for the case of students, that feelings such as anxiety, fear and insecurity are prevalent in the moments that precede a practical internship, given that the ICU is a new and complex environment that requires a higher level theoretical and practical knowledge of academics.²⁷

Learning based on the real work context consolidates knowledge, skills and attitudes in order to master the practice, deepening and contextualizing the necessary knowledge. In a learning process in order to train professionals who meet the demands, there is an intrinsic correlation between the educational process and the world of work and life.²⁸

The training strategy mediated by the bedside practice promotes a structured teaching-learning process in real time and with experiential application in the context of the care that is presented, contributing to the effectiveness of safe care practice, optimizing time for learning during the workday, in addition to bringing safety to professionals with references and guidance for exemplary and supervised practice.²⁹⁻³¹

In this regard, the study reaffirms the importance of the knowledge that can be acquired in admission or in-service training, with a view to improving the skills of newly graduated or newly allocated nurses, especially those with little or no prior experience in caring for critically ill patients. Training model allows hands-on supervision of skills at the bedside.

Furthermore, bedside training proved to be effective in contingency situations, where there is a need to meet the demand for qualified nurses in the short term for volume and critical care. The importance of experiential learning and centered on the apprentice professional is also highlighted as a philosophy that sustains this practice.

CONCLUSIONS AND IMPLICATIONS FOR PRACTICE

It is concluded that the adoption of a supervised method at the bedside, in a structured process of identification and follow-up, i.e., while professionals carried out their work activities, with the supervision of an instructor nurse, is a relevant training action.

Confidence in carrying out the procedures and satisfaction with this training methodology was high in the perception of newly graduated professionals or those with limited experience in caring for critically ill patients. The assessed procedures had a median proficiency greater than 8.0.

Instructor nurses collaborate with the acquisition of skills through supervision and intervention for the performance of

functions with quality and safety. The importance of having novice nurses committed to their own learning was also highlighted, considering their beliefs, facilities or difficulties.

Despite the satisfactory results with the proposed intervention, it is important to mention some study limitations, such as the use of retrospective data that were planned to be collected in a pandemic scenario, which restricts the investigation of information that, after analyzing the data, turned out to be important as: measure professionals' proficiency, comparing the performance of newly hired and relocated professionals already acculturated in the institution; assess the proficiency and performance of professionals versus the correlation with care indicators (infection, extubation, among others), to deepen and propose possible preventive interventions; and adopt reinforcements in supervised practice for validating skills and competences mapped according to the data; and analyze issues related to soft skills (teamwork, communication, clinical reasoning and decision-making).

Finally, according to the results obtained, it is suggested that new studies be carried out with the possibility of obtaining information that can feed back the training system, such as, for example, subsidizing educational institutions for the opportunities observed in the insertion of novice nurses in the environment of work.

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AUTHORS' CONTRIBUTIONS

Study design. Simone Cristina Azevedo Silva. Mariana Lucas da Rocha Cunha.

Data acquisition. Simone Cristina Azevedo Silva. Selma Tavares Valerio. Mariana Lucas da Rocha Cunha.

Data analysis and interpretation of results. Simone Cristina Azevedo Silva. Mariana Lucas da Rocha Cunha.

Article writing and critical review. Simone Cristina Azevedo Silva. Selma Tavares Valerio. Mariana Lucas da Rocha Cunha.

Approval of the final version of the article. Simone Cristina Azevedo Silva. Selma Tavares Valério. Mariana Lucas da Rocha Cunha.

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ASSOCIATE EDITOR

Fábio da Costa Carbogim 

SCIENTIFIC EDITOR

Marcelle Miranda da Silva 

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