



ANALYSIS OF HEALTHCARE PRACTICES FOR PREVENTION OF PRIMARY BLOODSTREAM INFECTIONS¹

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ABSTRACT

Objective: to analyze healthcare practices in the use of central venous catheters for the prevention of Primary Bloodstream Infections in an Intensive Care Unit. **Method:** cross-sectional study conducted in a University Hospital between March and June 2018 with professionals working in an Intensive Care Unit. A structured questionnaire and non-participant observation of the procedures related to insertion, preparation and administration of drugs and change of central catheter dressings were used. The data were analyzed using descriptive statistics and applying the Chi-square and Fisher's exact tests. **Results:** a total of 83 nursing professionals and 25 physicians participated. There were 260 drug administrations, 32 catheter insertions and 29 dressing changes. There was inadequacy of the hand hygiene practice in maintenance procedures, especially among nursing technicians. The best results were: skin preparation (94%), spontaneous drying of the antiseptic before punctures (96.87%) and respect for the changes of continuous and intermittent infusion sets (93.42%). **Conclusion:** the follow-up of preventive measures was undermined in important opportunities to avoid Primary Bloodstream Infections, being necessary to reinforce continuing education and implementation of healthcare protocols.

Keywords: Catheter-related infections. Cross infection. Patient safety. Professional practice. Intensive care units.

INTRODUCTION

The term healthcare-associated infections (HAIS) is currently used to classify the occurrence of acquired infections associated with any care setting, expanding its conceptualization as a public health problem⁽¹⁾. It is estimated that about 60% of HAIs are associated with some intravascular device, leading to prolonged hospital stays, high cost of care and high mortality rates⁽²⁻³⁾.

The occurrence of these infections has multifactorial causes, where the repercussion for morbidity and mortality rates is associated with the topography, the etiology, the microbiological profile and the pattern of resistance of microorganisms to antimicrobial agents, as well as the intrinsic conditions of the assisted patients, the performed procedures and the rate of use of invasive devices, such as central venous catheter (CVC), urinary catheter and mechanical ventilation^(1,4).

Currently, the National Patient Safety Program (PNSP, as per its Portuguese acronym) includes adverse events related to infections in health services, among them catheter-associated infections, as components of patient safety, highlighting the importance of initiatives that minimize their occurrence and fostering the inclusion of the topic in practices and teaching in the health area⁽⁵⁾, focusing on longitudinal strategies to encourage hand hygiene (HH), considering that this practice still has a low rate of adherence by professionals^(2,6).

CVC, a medical item widely used in Intensive Care Units (ICU), is related to the occurrence of Primary Bloodstream Infections (PBI), mainly by exposure of the intravascular environment to the external environment, both by contact with microorganisms that commonly live in the skin microbiota and those that are carried by the hands of healthcare staff during handling and in the provision of care to critically ill patients^(2,7). These infections are associated

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with severe bacteremia, which can reach a mortality rate of 40% in Brazil, prolonged hospital stays and increased use of resources, due to the impact on treatment and antimicrobial costs. Despite the severity and risks during care, they are largely preventable when adequate and long-lasting preventive measures are adopted in the healthcare practice⁽²⁾.

In view of this and aiming to improve the quality of care, the Institute for Healthcare Improvement (IHI) launched in 2012 a guide of safe measures based on scientific evidence called care “bundles”, which, when implemented together, are responsible for significant results in the sense of reducing Primary Bloodstream Infections (PBI) with safe practices during insertion and maintenance of the catheter⁽²⁾.

Therefore, one should prioritize HH; adequate selection of the insertion site, avoiding femoral punctures; use of maximum barrier with wide sterile field during insertion; adequate change of CVC dressings; friction of the hub and connectors for 5 to 15 seconds with alcohol solution before handling and administering drugs; change of circuits and infusion systems every 96 hours or according to institutional protocol; and daily reassessment of the need for catheter permanence⁽²⁾.

However, although prevention measures are established, much still needs to be done, since evidence continues to point to unsatisfactory levels of performance by health professionals involved in the process and lead to a reflection on the value of clinical protocols as a guide for decision-making and evidence-based practices.

Accordingly, by understanding the occurrence of extraluminal and intraluminal contaminations in the occurrence of PBI, it is possible to associate the occurrence of this event to failures in basic infection control practices and measures, since it is perpetuated by professionals through inadequate handling, thus highlighting the importance of investing in the strengthening of strategies related to the adherence of preventive behaviors by the team⁽²⁾.

In view of the above, based on this problem, the following research question arose: what are the healthcare practices developed during the employment of central venous catheters for the prevention of Primary Bloodstream Infections in an Intensive Care Unit?

The objective of this study was to analyze healthcare practices in the use of central venous catheters for the prevention of Primary Bloodstream Infections in an Intensive Care Unit.

METHODS

This is an exploratory descriptive and cross-sectional study conducted in the ICU of a University Hospital of a capital city in the northeastern part of Brazil, during the period from March to June 2018, from the application of a structured questionnaire and systematic non-participant observation.

This is a cross-sectional study, guided by the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) checklist tool⁽⁸⁾.

The population was composed of all professionals working in the ICU during the study period in the following categories: physicians, nurses and nursing technicians, totaling 112 professionals. The sample was stratified random. The margin of error was 2%, the reliability level was 95% and the questionnaire response rate was 96.43%, resulting in 108 participants, of whom 25 were physicians, 19 nurses and 64 nursing technicians.

Professionals undergoing training process were excluded from the research (medical and nursing residents from several specialization areas, undergraduate students, either medical or nursing), since this population is fluctuating, due to their turnover and short stay in the sector.

Data collection was based on self-administered application of a structured questionnaire, followed by systematic non-participant observation of the insertion, maintenance and CVC dressing change procedures by means of a checklist.

The data collection instruments were designed by the authors through an extensive literature review, in order to analyze the practices of insertion and care with CVC maintenance. As for the theoretical basis, the recommendations of the Brazilian National Health Surveillance Agency (ANVISA, as per its Portuguese acronym), the World Health Organization (WHO) and the international

guidelines proposed by the Centers for Disease Control and Prevention (CDC) were used as a reference, as well as the recommendations of the IHI.

Questionnaires

The questionnaires were composed of closed questions and were offered face-to-face and individually, being filled out by the participants in writing. Those professionals who could not respond to the questionnaire at the time of the approach due to their attributions were approached at another time that they considered more adequate to take part in the study.

In their composition, these questionnaires spoke about participants' identification, training courses and professional performance. In the first, data on gender, age, position held, post-graduation, specialization, training time and time working in ICU were collected. In the second, the participants were asked about their participation in training courses on HH and PBSI. Finally, with regard to professional performance, aspects about knowledge and self-assessment in the areas of CVC insertion and maintenance using the format of fixed responses to measure the frequency of safe practices, based on the gradation between "always", "almost always", "sometimes" or "never", were considered.

Accordingly, physicians were asked to self-assess their compliance with safe practices during CVC insertion, since they are responsible for performing these punctures, and to assess their knowledge about CVC maintenance care. The nursing staff, on the other hand, performed a self-assessment on maintenance, since they work directly in the preparation, administration and change of dressings, as well as an assessment of knowledge about safe practices during catheter insertion.

This step was carried out with the help of two scientific initiation scholarship holders who were previously followed-up and trained for the research.

Systematic non-participant observation

Systematic non-participant observation was initiated after the application of all

questionnaires and carried out with a methodology of passive observation by the researcher, who had insertion and mastery in the investigated practice, according to the opportunity to perform the procedures. This process was guided by a structured checklist, which was designed from the conception of two domains: insertion and maintenance – the latter taking into account two other steps, such as preparation and administration of drugs and CVC dressing change.

Accordingly, for this moment, only those procedures that were duly assessed at the time by the researcher and that were followed-up from beginning to end were considered. The collection occurred alternately between shifts and on different days of the week, including weekends and holidays, with variations in frequencies and distributions in shifts according to the availability and convenience of the researcher.

Concerning the insertion, the following aspects were considered: insertion situation; HH technique; maximum barrier; surgical clothing; skin preparation; insertion site of choice; CVC fixation technique; and use of ultrasound to guide this practice.

In the procedures for drug preparation and administration, the following items were observed: HH; use of sterile syringes, opened immediately before preparing the doses, and of solutions up to one hour after preparation; disinfection of the vial or ampoule with 70% alcohol; execution of the disinfection of hubs, cannulas and connections with alcohol solution; identification of the infusion systems and connections with the change date; and daily change of the intermittent solution equipment (sets).

Regarding the CVC dressing change procedure, the following were analyzed: MH; dressing appearance, presence of dirt; dressing protection during bathing; type of gloves used for the procedure; use of protective barriers; type of antiseptic solution and chosen dressing; and professional category responsible for the procedure, discriminating nurses or nursing technicians.

Regarding the CVC insertion item, only catheter punctures, performed in the unit studied for therapeutic purposes, aimed at the need for

vasoactive drugs, sedation, parenteral nutritional therapy, among others, were considered; while punctures for the insertion of a Shiley type double-lumen catheter, used as a short-term access for renal replacement therapy, were disregarded.

The data from the observations and questionnaires were organized and analyzed based on descriptive and inferential statistics. The database was designed in EXCEL format, version 2017. In order to perform the descriptive tables and apply statistical tests, the Statistical Package for the Social Sciences (SPSS) software, version 25.0, was used.

As for the numerical variables of age, working time, time since graduation and time since training, descriptive statistics of measures of trend and data dispersion were analyzed, for example, minimum, maximum, mean and standard deviation. When assessing the interviewees' profile, self-assessment and knowledge about CVC insertion and maintenance, descriptive analysis was performed by means of absolute and relative frequency distributions. When comparing the items on professional perception and performance with the position held, the Chi-square and Fisher's exact tests were applied. For all statistical tests performed, the significance level was 5%.

This study was approved by the Research Ethics Committee before the data collection procedure, according to the Consolidated Opinion nº 2.721.411/CAAE: 80013817.8.3001.5292, where all professionals signed the Free and Informed Consent Form (FICF).

RESULTS

Questionnaires

The study had the participation of 108 professionals, being 83 nursing professionals (64 nursing technicians and 19 nurses) and 25 physicians working during the three shifts. Only one professional refused to participate in the study and three nurses were away on sick leave or vacation, thus being excluded from the study.

There was a predominance of females (59.26%) among the nursing categories and males among the physicians. The age ranged from 27 to 60 years, mean age of 38.04 (± 7.03), with training time from 3 to 32 years, mean of 14.11 (± 5.923), and professional experience in the ICU of at least 8 months and at most 25 years, mean of 9.23 (± 6.15). The workload ranged from 20 to 40 hours weekly, mean 33.92 (± 5.22).

Through the Kolmogorov-Smirnov test, which checks the assumption of normality of the data, for a significance level of 5%, there is evidence that age, workload and training/working time in the ICU do not have a normal distribution.

Most of them had *lato sensu* specialization (55.56%), and intensive care was predominant (55%). It was found that most of them (98.15%) reported having knowledge about PBSI prevention measures and listed that they did not receive (62.04%) training in relation to this issue, but received on HH (90.74%), where nursing technicians and nurses showed the highest percentage of participation, with 97% and 95%, respectively.

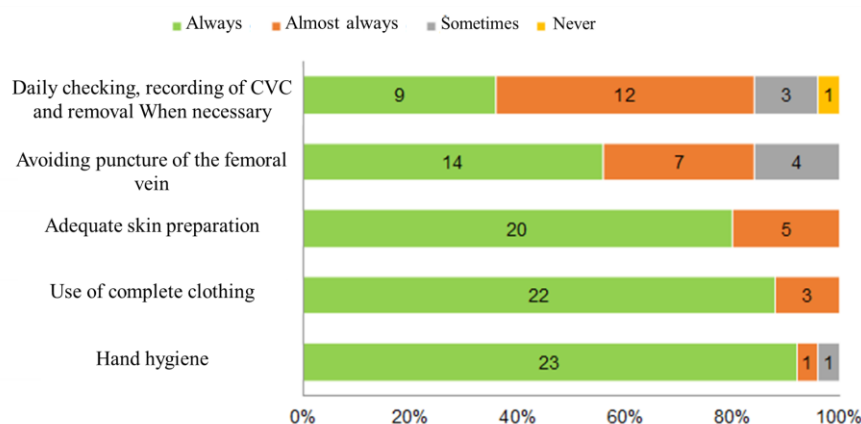


Figure 1. Physicians' self-assessment regarding central venous catheter insertion. Northeast Region of Brazil, 2018 (n=25)

As for the physicians' self-assessment regarding the insertion of the central venous catheter, most of them listed always clean their hands (92%), always use the correct clothing (88%), always perform the adequate skin preparation (80%), always avoid puncturing the femoral vein as the site of choice (56%) and almost always perform the daily check and record regarding the need for the device (48%), providing with drawal when it no longer has a

clinical indication that justifies its permanence (Figure 1).

Regarding nurses' and nursing technicians' self-assessment of CVC maintenance, described in Figure 2, the highest percentage of frequency in "always" and "almost always" was present in the HH items before and after handling the devices; change of the dressing and choice of the appropriate dressing; and withdrawal of the catheter when it no longer has a clinical indication that justifies its permanence.

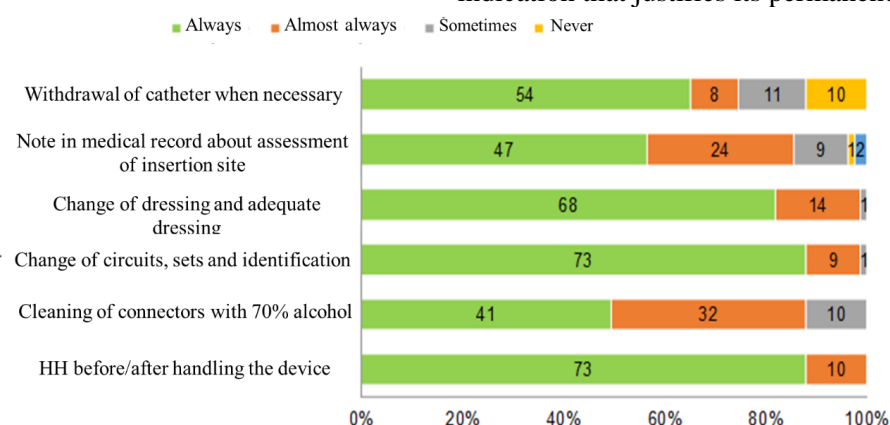


Figure 2. Nurses and nursing technicians' self-assessment regarding central venous catheter maintenance. Northeast Region of Brazil, 2018 (n=83)

Observational

In the observational step, 260 observations of drug administration were performed; and, from these, it was possible to follow up 257 preparations. For insertion, 32 procedures and 29 observations of CVC dressing change were followed-up. For the techniques of drug preparation/administration (97.69%) and dressing change (55.17%), the category of nursing technicians prevailed in the execution of these procedures.

CVC Insertion

Of the total observations of insertions, most happened as elective (93.75%). With respect to HH, there was a predominance of the surgical antisepsis technique with brushing (96.77%), where degerming chlorhexidine (70.97%) was the most used antiseptic. In one case, antiseptic hand hygiene was chosen (3.23%) prior to puncture. All used surgical clothing, but it was complete only in 78%, using a large sterile field.

All catheters were fixed by suture stitch.

With regard to skin preparation, degerming followed by skin antisepsis with alcoholic chlorhexidine predominated in 94% of the observations. The use of alcoholic chlorhexidine and iodophoric compounds as the only skin preparation occurred in only one observation each. There was spontaneous drying of the antiseptic before puncture in 96.87%. The most used insertion site was subclavian (53.13%), while femoral puncture occurred in only two cases. Most procedures were performed without the use of ultrasonography (USG) to guide the technique (78.12%).

Drug preparation and administration by means of CVC

During care regarding drug preparation, it was observed that there was no HH before preparing the dose (63.81%), where sterile syringes and needles were opened immediately before use (99.22%). Conversely, there was no disinfection of the vial or ampoule with 70%

alcohol before breaking the ampoule (92.22%). The solutions were used immediately after preparation (99.62%), and only 10% of the professionals performed the HH procedure before drug administration, where the simple hygiene technique predominated (57.69%). The friction of hubs, cannulas and connections with an alcohol solution for 5 to 15 seconds was performed by the majority during the procedure (65.38%). The identification of the change date of the IV sets was respected according to

institutional norms (90.91%), as well as the daily change of IV sets for intermittent infusion solutions (93.42%).

As described in Table 1, a statistically significant difference was identified when the association between the variables “HH before preparing the dose” and “professional position held” was checked. Nurses showed a higher percentage of adherence to the HH procedure before preparing the dose, while nursing technicians had a lower percentage.

Table 1. Criteria assessed during observation of drug administration in central venous catheter. Northeast Region of Brazil, 2018 (n=260)

Region of Brazil, 2018 (n=200)									
Drug administration	Professional								*p-value
	Nurse				Nursing technician				
	YES		NO		YES		NO		
	n	%	n	%	n	%	n	%	
HH before preparing the dose	05	83.3	01	16.6	08	35.0	163	64.9	0.025
Performs disinfection of the vial or ampoule with 70% alcohol before inserting the needle and breaking the ampoule	02	33.3	04	66.6	18	7.1	233	92.8	0.072
HH before administering the drug	01	16.6	05	83.3	25	9.8	229	90.1	0.472
Glove use	0	0.00	06	100.0	26	10.2	228	89.7	1.000
Friction of hubs, cannulas and connections with alcohol solution for 5 to 15 seconds	06	100.0	0	0.0	164	64.5	90	35.4	0.096
Total	100.0% (n=6)				100.0% (n=254)				

*Fisher's exact test – the results with p values < 0.05 were considered statistically significant.

CVC dressing change

As for the appearance of the dressings before their changes, it was observed they were usually clean and intact (75.86%). Nonetheless, some of them had no dressing (17.24%) or were dirty (6.9%). There was no protection of the dressing during the bed hygiene procedures of the patients (65.52%), and the adherence rate to hand hygiene before the practice occurred in most of the observed procedures (51.72%).

The use of antiseptic solution with alcoholic chlorhexidine occurred in all cases. In addition, regarding the chosen dressing, conventional dressing with gauze and micropore/adhesive tape was predominant (86.21%). In addition, considering the two professional categories, non-identification with specification of the change date on the dressing immediately after the technique prevailed (51.72%).

Table 2. Assessment of central venous catheter dressing change according to professional category. Northeast Region of Brazil, 2018 (n=29)

Dressing change	Professional								*p-value
	Nurse				Nursing technician				
	YES		NO		YES		NO		
	n	%	n	%	n	%	n	%	
HH before practice	10	76.9	03	23.0	05	31.2	11	68.7	0.014
Identification with change date	08	61.5	05	38.4	06	37.5	10	62.5	0.198
Total	100.0% (n=13)				100.0% (n=16)				

**Fisher's exact test – the results with p values < 0.05 were considered statistically significant.

According to Table 2, a statistically significant difference was found when the variables “hand hygiene before changing dressings” and “professional position held” were associated. Accordingly, nurses showed a higher percentage of adherence to HH before this practice, while nursing technicians had a lower percentage. It was also observed the stratification by professional category in relation to the identification of the dressing with change date.

DISCUSSION

Regarding the knowledge of PBSI prevention measures, the training on HH showed more satisfactory results among the categories, especially nurses and nursing technicians. It should be highlighted that, when it comes to issues relevant to ICU practice, there are still gaps related to lack of training, thus reinforcing the need for educational programs as an efficient measure to encourage adherence to HH and infection prevention measures in the hospital environment^(4,9).

When comparing the professional perceptions described in the questionnaires and the observations, the physicians obtained a more reliable approximation between what was reported and what was performed during CVC insertion, especially in the preparation of the skin and spontaneous drying of the antiseptic and in the choice of the insertion site.

As for HH, physicians reported always performing it during the CVC insertion procedure, with an adherence rate of 96%, a finding similar to those of other studies that also obtained a positive assessment regarding the use of the CVC bundle and successful results in the HH practice⁽¹⁰⁻¹¹⁾.

It is worth underlining that, although the safe insertion checklist, applied during CVC puncture, aims at an adequacy of non-conformities and reduction of infections, it is based on an intervention methodology and directs physicians and staff to perform the HH practice, especially when most of the procedures observed are elective, as depicted in the study⁽¹⁰⁾.

In the year 2009, The WHO highlighted the preference for the surgical hand antisepsis technique, with antimicrobial soap or alcoholic

preparations in high concentrations, in order to replace the use of surgical hand brushing with antiseptic, because it has a better efficacy and residual effect and because of the possibility of the latter causing microlesions on the skin⁽¹²⁻¹⁴⁾.

In the institution under study, the brushing technique for surgical hand antisepsis was also used as the practice of choice for CVC punctures, similarly to what is described in the pertinent literature^(13,15). Because of this, the hospital needs to standardize and implement an alcoholic surgical antiseptic for the preparation of the team's hands, suitable for this purpose.

Studies carried out in Brazilian hospitals^(9,16) and internationally^(10,17-18) have also found good results related to HH before insertion, antisepsis of the skin and drying of the antiseptic prior to puncture and reinforced the importance of giving more value to the use of maximum barrier and avoiding femoral punctures, showing significant reduction of PBSI after using the principles proposed by the bundles and applying the safe insertion checklist.

The adequate preparation of the skin and the spontaneous drying of the antiseptic before puncture were the ones that obtained the best results during the insertion of the CVC device by the physicians, being the femoral puncture also in less representation among the chosen sites. The literature signalizes a predilection for subclavian punctures, avoiding the femoral anatomical sites, as well as jugular, mainly due to the risk of infection and the difficulty infixing the catheter⁽¹⁵⁾. In this study, the use of the maximum barrier was respected in 78% of punctures and the adequate choice of the insertion site occurred in 94% of cases, with subclavian punctures being predominant.

The use of USG to guide the puncture was present in only seven observed punctures. It is noteworthy that the use of USG in catheterization in real time or for skin demarcation in elective situations can be applied when the technology is present and by those who master the execution of this resource as an aid strategy to avoid other complications derived from puncture attempts⁽¹⁵⁾.

The scenario of adherence to HH shows that the findings are still far below what is expected for a safe practice in critical patient care, especially among nursing technicians who had a

lower percentage of HH before drug preparation and dressing change^(2,14,19-20).

Accordingly, what can be seen is that having knowledge about a procedure does not reflect in the execution of good practices, in such a way that, although nursing professionals have received training on the prevention of PBSI and HH, they did not show satisfactory adherence to preventive measures.

This fact is worrisome, considering that this category is in greater contact with patients, calling attention to the need to invest in more energetic interventions with combinations of didactic strategies, practical simulations and feedback for the health team, as well as improvement of surveillance mechanisms and identification of daily barriers that perpetuate bad practices, in order to make HH accessible and possible.

Despite the low adherence to this practice, other studies also corroborate the findings pointed out in this research, showing that this concern is shared in other realities^(6,13,19,21). In some cases, the execution of the technique after contact with patients prevailed over the other indications that precede contact with patients. In addition, the use of soap and water also prevailed over alcoholic preparations^(6,19).

The WHO considers the HH practice as the main measure to reduce HAIS. Despite being a simple measure, it still has low adherence by professionals around the world and constitutes a global challenge to institutions that need to provide optimal conditions for encouragement and long-term maintenance^(2,14,21). The global adherence rate of HH varies widely, with a mean of 40%⁽²²⁾. Accordingly, the intention of the WHO is to ensure the growth of these figures progressively until 2020, when optimal levels would be reached from the establishment of a safety culture. Therefore, new measures need to be constantly implemented to improve this reality in health services^(2,14,21).

Given the above, it is feasible to think about the need to investigate the reasons that lead to non-adherence to the practice. Some studies have already awakened to the obstacles that professionals face daily and that may be related to these numbers, among them the lack of inputs or inadequate materials, lack of an adequate physical structure and infrastructure that allows

easy access to sinks, paper towels and alcohol gel dispensers, forgetfulness, work overload, as well as lack of knowledge, which can lead to inadequate practice and skin lesions, most often related to the use of gloves and soap^(19,21).

Disinfection of the vial/ampoule with 70% alcohol during the drug preparation and the friction of connectors with alcohol solution before administering drugs in the CVC devices need to be reinforced, especially among nursing technicians. As for dressing changes, gauze and adhesive tape predominated.

There is a strong recommendation proposed by the international guidelines of the Centers for Disease Control and Prevention (CDC)⁽²³⁾ and EPIC3⁽²⁴⁾ in relation to the friction of the terminal portion of the catheter with 70% alcohol solution, in order to minimize the risk of contamination before handling the device. Although it was observed that this practice is not completely incorporated among the nursing technicians in this reality, our findings were superior to those found by other studies that, when analyzing adherence to the catheter maintenance bundle, suggested greater difficulty in maintaining good indicators related to this practice for all observed categories, with rates as high as 10%⁽²⁰⁾.

The care with CVC dressings should also be emphasized, because, during bed bath, the intention is to avoid contamination of the device with dirtiness coming from water or moisture caused throughout the procedure. Accordingly, it is recommended to use barrier mechanisms to protect the catheter during body hygiene⁽²³⁾.

Compared to the use of conventional gauze dressings, the transparent film with chlorhexidine has shown supremacy, with significant beneficial effect in reducing the indicators of catheter-related infections, suggesting greater profitability for hospital costs^(15,25), and it is a practice recommended by CDC⁽²³⁾ and EPIC3 guidelines⁽²⁴⁾.

Therefore, it should be underlined the need to choose dressings that prioritize the protection of the insertion orifice, allowing daily visualization of it to assess the presence of signs of infection, as well as one that provides comfort, well-being and that is able to induce a smaller amount of local reactions that can lead to skin damage in the assisted patient^(15,24).

Regarding the PBSI prevention, the gaps in healthcare depend on the performance and intervention, whether direct or coadjuvant, of institutional leaders and managers, since they undermine the quality of service and expose the patient to risks, and it is essential to bring the manager closer in the sense of following-up the failures of technical processes, so that successful preventive actions can be promoted.

This work can guide, consequently, the execution of new studies in this or another reality, with the promising intention of raising this discussion with institutional managers, recognizing the theme as an institutional goal capable of bringing repercussions to public health.

The limitations of this study were related to the option for observation by convenience, which made it difficult to observe at all times, since most of them happened in the morning and afternoon shifts, not being feasible a proportionality between the times and the number of observations.

CONCLUSION

The current research identified the compliance rates in relation to the PBSI preventive measures for the professional categories involved in direct care. Inadequate follow-up of the HH practice and adherence to safe practices related to CVC maintenance were observed. There was a predominance of the choice for the simple hand hygiene technique with soap and water to the detriment of the use of alcoholic preparations.

From the results introduced here and their relationship with what is described in the literature, it is possible to reinforce the importance of continuing education and continuous encouragement for adherence to HH as strategies to be practiced, as they play out as essential measures for changing a reality, without requiring large investments and acquisition of new technologies. Moreover, it should be highlighted the advocacy for the follow-up of CVC maintenance bundles for the prevention of PBSI in the studied reality, besides the implementation of healthcare protocols focused on clinical evidence and strategies for following-up and providing feedback on indicators for the team.

ANÁLISE DAS PRÁTICAS ASSISTENCIAIS PARA PREVENÇÃO DAS INFECÇÕES PRIMÁRIAS DA CORRENTE SANGUÍNEA

RESUMO

Objetivo: analisar as práticas assistenciais no uso do cateter venoso central para a prevenção das Infecções Primárias da Corrente Sanguínea em uma Unidade de Terapia Intensiva. **Método:** estudo transversal realizado em um Hospital Universitário entre março e junho de 2018 com profissionais de uma Unidade de Terapia Intensiva. Utilizaram-se questionário estruturado e observação não participante dos procedimentos inserção, preparo e administração de medicação e troca de curativos de cateter central. Os dados foram analisados por meio da estatística descritiva com aplicação do Teste Qui-quadrado e exato de Fisher. **Resultados:** participaram 83 profissionais de enfermagem e 25 médicos. Foram observadas 260 administrações de medicações, 32 inserções de cateter e 29 trocas de curativos. Houve inadequação da prática de higienização das mãos nos procedimentos de manutenção, principalmente entre os técnicos de enfermagem. Os melhores resultados foram preparo da pele (94%), secagem espontânea do antisséptico antes das punções (96,87%) e respeito às trocas dos equipos de infusão contínua e intermitente (93,42%). **Conclusão:** o seguimento das medidas preventivas estava comprometido em oportunidades importantes para evitar Infecções Primárias da Corrente Sanguínea, sendo necessário reforçar a educação permanente e a implementação de protocolos assistenciais.

Palavras-chave: Infecções relacionadas com cateteres. Infecção hospitalar. Segurança do paciente. Prática profissional. Unidades de cuidados intensivos.

ANÁLISIS DE LAS PRÁCTICAS ASISTENCIALES PARA LA PREVENCIÓN DE LAS INFECCIONES PRIMARIAS DE LA CIRCULACIÓN SANGUÍNEA

RESUMEN

Objetivo: analizar las prácticas asistenciales en el uso del catéter venoso central para la prevención de las Infecciones Primarias de la Circulación Sanguínea en una Unidad de Cuidados Intensivos. **Método:** estudio transversal realizado en un Hospital Universitario entre marzo y junio de 2018 con profesionales de una Unidad de Cuidados Intensivos. Se utilizaron cuestionario estructurado y observación no participante de los procedimientos inserción, preparación y administración de medicación y cambio de vendajes de catéter central. Los datos fueron analizados por medio de la

estatística descritiva com aplicação da Prova Chi-cuadrado y exacta de Fisher. **Resultados:** participaram 83 profissionais de enfermagem e 25 médicos. Se observaram 260 administrações de medicamentos, 32 inserções de cateter e 29 intercâmbios de vendajes. Houve inadequação da prática de higienização das mãos nos procedimentos de manutenção, principalmente entre os técnicos de enfermagem. Os melhores resultados foram na preparação da pele (94%), secado espontâneo do antisséptico antes das punções (96,87%) e respeito aos trocas dos equipamentos de infusão contínua e intermitente (93,42%). **Conclusão:** o acompanhamento das medidas preventivas estava comprometido em oportunidades importantes para evitar Infecções Primárias da Circulação Sanguínea, sendo necessário reforçar a educação permanente e a implementação de protocolos assistenciais.

Palavras chave: Infecções relacionadas com cateteres. Infecção hospitalar. Segurança do paciente. Prática profissional. Unidades de cuidados intensivos.

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