

IMPLEMENTATION OF CARE-BASED CARE-BASED CARE QUALITY PROTOCOL: EXPERIENCE REPORT

IMPLANTAÇÃO DE PROTOCOLO DE QUALIDADE ASSISTENCIAL BASEADO EM CUIDADOS CENTRADOS NO PACIENTE CRÍTICO: RELATO DE EXPERIÊNCIA

IMPLEMENTACIÓN DEL PROTOCOLO DE CALIDAD ASISTENCIAL BASADO EN EL CUIDADO CENTRADO EN EL PACIENTE: INFORME DE EXPERIENCIA

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Funding: No funding.

Submitted on: 2018/10/08

Approved on: 2019/07/08

ABSTRACT

Objective: to describe the stages of the elaboration and implementation of a quality care protocol, based on the ABCDEF bundle, adapted to local needs, integrating it with the patient-centered view of care experienced by the multiprofessional group through the eyes of nurses. **Method:** this is an experience report of the elaboration and partial implementation of a care quality protocol, based on the PAD guidelines inserted in the Care Quality Program “ABCDEF”, which addresses the management of analgesia, sedation and delirium, encompassing discontinuation of mechanical ventilation, early mobilization, sleep hygiene and humanization protocols since ICU admission. **Results:** the protocols of sedoanalgesia, discontinuation of mechanical ventilation and early mobilization were implemented so far. These underwent extensive discussion with the multidisciplinary care team prior to implementation. **Conclusion:** there are many factors that facilitate and hinder the implementation of ABCDEF bundle in our reality. The change proposal is well accepted by the group, but adherence is not constant. Intense efforts with continuing education, meetings with multiprofessional staff and appreciation of work by managers seem to improve engagement.

Keywords: Critical Care; Protocols; Delirium; Patient Care Team; Patient Safety.

RESUMO

Objetivo: descrever as etapas da construção e implantação de um protocolo de qualidade assistencial, baseado no bundle ABCDEF, adaptado às necessidades locais, integrando-o à visão de cuidado centrado no paciente, vivenciadas pelo grupo multiprofissional pelo olhar dos enfermeiros. **Método:** trata-se de relato de experiência da construção e implantação parcial de um protocolo de qualidade assistencial, baseado nas orientações do PAD inserido no Programa de Qualidade Assistencial “ABCDEF”, que aborda o manejo da analgesia, da sedação e do delirium, englobando os protocolos de desmame de ventilação mecânica, mobilização precoce, higiene do sono e humanização desde a admissão na UTI. **Resultados:** foram implantados, até o momento, os protocolos de sedoanalgesia, desmame da ventilação mecânica e mobilização precoce. Estes passaram por ampla discussão com a equipe assistencial multiprofissional antes da implantação. **Conclusão:** inúmeros são os fatores que facilitam e dificultam a implantação do bundle ABCDEF em nossa realidade. A proposta de mudança é bem aceita pelo grupo, mas a adesão não é constante. Esforços intensos com educação permanente, encontros com equipe multiprofissional e valorização do trabalho pelos gestores parecem melhorar o engajamento.

Palavras-chave: Cuidados Críticos; Protocolos; Delirium; Equipe de Assistência ao Paciente; Segurança do Paciente.

RESUMEN

Objetivo: describir las etapas de la construcción e implementación de un protocolo de calidad asistencial, basado en el paquete de medidas ABCDEF, adaptado a las necesidades locales, integrándolo con la visión de la atención centrada en el

How to cite this article:

Cavalcanti TC, Schmitz TSD, Berto PP, Plotnik R, Fernandes VR, Azzolin KO. Implementation of care-based care-based care quality protocol: experience report. REME – Rev Min Enferm. 2019[cited ____];23:e-1241. Available from: ____ DOI: 10.5935/1415-2762.20190089

paciente, experimentada por el grupo multiprofesional a través de los ojos de los enfermeros. Método: informe de experiencia de la construcción e implementación parcial de un protocolo de calidad asistencial, basado en las pautas de PAD insertadas en el Programa de Calidad Asistencial "ABCDEF", que trata del manejo de la analgesia, sedación y del delirio, que incluye los protocolos de destete de ventilación mecánica, movilización temprana, higiene del sueño y humanización desde la admisión a la UCI. Resultados: hasta el momento fueron implementados los protocolos de sedoanalgesia, de destete de la ventilación mecánica y de movilización temprana. Estos se sometieron a una extensa discusión con el equipo de atención multiprofesional antes de la implementación. Conclusión: hay muchos factores que facilitan y dificultan la implementación del paquete de medidas ABCDEF en nuestra realidad. La propuesta de cambio es bien aceptada por el grupo, pero la adhesión no es constante. Esfuerzos intensos con educación continua, reuniones con el personal multiprofesional y la apreciación del trabajo por parte de los gerentes parecen mejorar el compromiso.

Palabras clave: Cuidados Críticos; Protocolos; Delirio; Grupo de Atención al Paciente; Seguridad del Paciente.

INTRODUCTION

The treatment of critically ill patients has evolved over the years, resulting in a reduction in intensive care unit (ICU) mortality rates. However, increased survival was associated with some complications, such as ICU-acquired delirium and weakness. These morbidities are inherent to critical illness and independently predict increased mortality, days on mechanical ventilation (MV), length of ICU stay, use of continuous sedation and physical restrictions. In the long term, it is associated with the reduction of patients' normal cognitive, emotional and physical capacity, making it difficult to return to previous habitual activities.¹

In the search for better living conditions after ICU, multidisciplinary teams have developed strategies that integrate practices to optimize the return to daily activities after acute and critical events. The American Society for Critical Care (SCCM) has elaborated the guideline for pain management, agitation and delirium (PAD), which prioritizes the treatment of pain in ICU patients, admitting its relationship with sleep disorders, with traumatic memories, with posttraumatic stress disorder, with the development of chronic pain and lower post-discharge ICU quality of life. Delirium is an independent predictor of functional decline, readmissions, and severe neurocognitive deficits, comparable to traumatic brain injury or moderate Alzheimer's disease.²

The evolution of ICU sedation and analgesia studies has shown an improvement in outcomes by keeping patients more awake, allowing for an earlier evolution of the discontinuation of mechanical ventilation (DMV) and extubation, directly impacting the reduction in ICU length of stay and mortality

of these patients.³ A study with association of sedation protocols and DMV compared with only a protocol of DMV showed a reduction in MV time and mortality in the protocol association group.⁴ Later, another study that used the association of sedation protocol and early mobilization demonstrated a reduction in the time of MV and delirium in critically ill patients.⁵ These studies reinforce the idea that the association of care protocols promotes improvement of outcomes in critically ill patients.

In 2010, scholars on the subject proposed building the Awakening and Breathing Coordination bundle, Delirium monitoring/management, and Early exercise/mobility (ABCDE).⁶ Studies continued to evaluate the benefit of using this strategy in improving outcomes in the ICU,⁷ with promising results. In 2019, a randomized multicenter study of more than 15,000 patients conducted in 68 ICUs in the US achieved significant improvement in the outcomes of bundled care patients, including improved survival, reduced MV time, delirium, immobility and ICU readmissions.⁸ SCCM has adopted this evidence-based practice strategy as a tool for organizing care for critically ill patients who, when taken collectively, improve outcomes, recently broadening the ABCDEF bundle, ensuring the family's role in care.²

Based on current evidence, on the control of events detrimental to health recovery in critically ill patients, the ICU multiprofessional staff of a large hospital in southern Brazil has elaborated a quality care protocol. This, supported by the PAD guidelines suggested by the SCCM and inserted in the Care Quality Program "ABCDEF", addresses the management of analgesia, sedation and delirium, encompassing discontinuation of mechanical ventilation, early mobilization, sleep hygiene and humanization protocols since ICU admission.

This experience report aims to describe the stages of the elaboration and implementation of a quality care protocol, based on the ABCDEF bundle, adapted to local needs, integrating it with the patient-centered view of care experienced by the multiprofessional group through the eyes of nurses, serving assistance to other staffs that are in this process of seeking care qualification.

METHOD

This is a descriptive study reporting the experience of the strategies used to elaborate and implement the protocols recommended in the ABCDEF bundle in a type III intensive care center (ICU) of a university hospital in southern Brazil. This institution is certified by the Accreditation International of the Joint Commission International (JCI), earned in 2013 and 2017, a pioneer among Brazilian university hospitals. This certification represents compliance with international standards of care,

management, infrastructure and professional qualification, focusing on the quality and safety of patients and professionals.

It currently has 842 beds, of which 39 are in the ICU, the reference unit for this study.

Due to the complexity and the need for integrated care, the participation of an interdisciplinary group was essential throughout the process. The service currently has a multiprofessional staff composed of nutritionist, psychologist, speech therapist, social worker, pharmacist, in addition to the core team of doctors, nurses and Nursing technicians.

For review and/or elaboration of the above protocols, the itinerant multiprofessional staffs were involved, that is, according to the need of the theme to be discussed. The discussions in the working groups (WG) lasted for 12 months, primarily to elaborate the theoretical aspects of each protocol, based on literature review, with original published articles and specialty guidelines. This was combined with the experience of the professionals involved, followed by a broad analysis of the feasibility of implementing the steps belonging to the ABCDEF bundle. Consultation was conducted with professionals from the institution with expertise in each of the subjects covered. After the protocol elaboration phase by the staff, consistency was published and consulted with the ICU care teams, in order to verify understanding and identify opportunities for improvement.

The WGs were basically formed by representatives of the medical, Nursing and physiotherapy staff. However, for the analgesia and sedation protocol, the unit's clinical pharmacist was added to the group, without physical therapy participation. For the DVM protocol and early mobilization, two more physical therapists were invited, besides the one belonging to the group. The analgesia/sedation and DVM protocols, however, were updated and reimplanted, as they were already part of the care. For the protocol of sleep hygiene and humanization of care, besides the WG, the ICU psychologist was invited.

Prior to the reimplantation of the first protocol (sedoanalgesia), "awareness workshops" were held with the multiprofessional team regarding the importance of delirium in the prognosis of critically ill patients. This was done from an expository presentation by the multiprofessional team, ending with the patient-centered care message as the best tool for delirium prevention and ABCDEF bundle presentation. Subsequent to the awareness-raising workshops, a comprehensive review was conducted with the Nursing staff regarding delirium assessment using the Confusion Assessment Method for the Intensive Care Unit (CAM-ICU), which was not part of the assessment routine. nurses' clinic.

The lecture was chosen with subsequent analysis of simulated cases, as well as practice *in loco* in patients admitted to the ICU. Pain scales – numerical/analog scale and Critical-Care Pain Observation Tool (CPOT) – and sedation and

agitation assessment using Richmond Agitation-Sedation Scale (RASS) were already routinely performed at clinical evaluation by the team. Regarding the implantation, it was planned to introduce the protocols sequentially, with minimum washout intervals of 45 days between each step.

In parallel to the development of these protocols, there was the implementation of the multiprofessional bedside round. This round was structured based on discussions with the medical, Nursing, physiotherapy, psychology, nutrition and speech therapy staff, based on patient-centered care. A checklist was structured as a tool to contemplate the functioning evaluation of sedation, DVM, mobilization, sleep hygiene and humanization protocols. After conducting a pilot of the multidisciplinary round of two months and subsequent adjustments, the implementation of care protocols was started for further validation, through the evaluation of care indicators and clinical outcomes of patients.

IMPLEMENTATION OF THE PROTOCOLS

The analgesia and sedation protocol was implemented from small punctual groups with the medical and Nursing staff during the care shift, using the patients' own clinical cases as a simulation of the management of sedoanalgesia. For evaluation of this protocol, for example, balance indicators (vascular device removal rate, accidental extubation rate), adherence indicators (RASS adequacy rates, CPOT, CAM-ICU) and effectiveness indicator (reduction of delirium rates).

The DVM protocol was updated after extensive discussion with the multidisciplinary staff, which mainly involved the medical team, physiotherapy and Nursing. A presentation was held with open discussion among the entire care team, seeking to validate the protocol. Medical and physiotherapy staff manage the process. Nursing acts mainly in the identification of signs of intolerance to spontaneous breathing test during DVM. For instrumentalization, punctual group dynamics were performed with Nursing with this approach, besides the discussion of protocol steps and opportunities for bedside intervention.

The early mobilization protocol was elaborated with the physiotherapy staff and widely discussed with the Nursing and medical team. Initially it was presented with open discussion for the group of routine physicians and physiotherapy. Prior to implementation, there was a concern of the team to assess the knowledge of the theme by the Nursing staff, especially in relation to the benefits and barriers to mobilization (use of pre and post-test tool). A bedside checklist was elaborated to determine the needs of professionals and equipment to mobilize safely. Again, punctual groups were chosen to discuss

the protocol and checklist. For the implementation, changes in the Nursing work process were necessary to equalize the care needs and specificities in each shift.

The sleep hygiene protocol was started from an electronic and written survey (in a ballot box), in which all team members were invited to suggest improvements that could contribute to the sleep promotion of ICU patients. From the suggestions obtained and the literary research on the theme, actions were defined for the construction of improvements. Discussions were necessary with the teams outside the ICU, such as radiology, laboratory, nephrology, in order to minimize the performance of non-urgent procedures from 0 to 5h. Engineering assessment for lighting adaptation in the ICU and review of furniture was requested to reduce noise. The process of raising awareness among the care team about the importance of noise reduction at night, as well as the restructuring of nightly routines such as hygiene and individualized patient monitoring, are ongoing, however, many team initiatives are already underway to promote patients' sleep hygiene after initial sensitization. In all work shifts, multiplier professionals were defined, including nurses and Nursing technicians, who will perform multiplication in focus groups for the other professionals.

The humanization protocol is currently being implemented. Initially, the process of extending visiting hours was organized. Family members had visitation access for 2 hours and 30 minutes a day. After the process of organization by the leaders and leaders of the ICU, it began in August 2018 the expansion of visitation to 6 hours and 30 minutes daily for two family members agreed by the nucleus (patient/family), while the other family members remained with visitation right according to routine (three fractioned hours a day). The expansion of the visit was made possible through an extension project developed in partnership with the university, coordinated by professors of the School of Nursing and by the Nursing and administrative leaders, high school and undergraduate students, and young apprentice. Undergraduates, under the supervision of the leaders, have been responsible for welcoming families, holding daily groups with family members interested in participating in the extended visit. These meetings address issues such as unit routines, devices used to treat patients, infection control, ethics and confidentiality in relationships with other family members, patient rights and duties, and good practices in contact with patients and staff. Young apprentices have contributed to control access to the ICU by family members already qualified to participate in the extended visit, staying for seven hours a day at the reception of the unit.

Currently, the humanization group develops a process of communication improvement for the Nursing, medical and physiotherapy team, in order to increase empathy and welcoming with patients and families, as well as among the

care teams. The care team was orchestrated through simulated training on how to give bad news, in order, among others, to raise awareness about the importance of the family in defining the therapeutic plan for the patient. Support groups coordinated by the unit's doctor and psychologist have been held twice a week, providing psychospiritual support to the relatives of ICU patients.

The last step after the implementation of all protocols is an activity in the modality of "distance education". Three modules are foreseen for each primary care team (doctors, Nursing and physiotherapy), taking a similar initial approach and then individualizing the main bundle topics for each professional core.

To support the management of all protocols, care indicators were established to monitor the results and monitor adherence after implementation. Data collection will be performed every three months after the establishment of each protocol.

To guarantee the ethical precepts, the protocols were developed through an integrated project submitted and approved by the institutional ethics committee. Still, the implementation of care protocols is part of the institution's strategic planning regarding patient and family-centered care. Everyone involved in this process is part of the care team and leaders of the intensive care service.

RESULTS

After the implementation of the protocols, the monitoring and indicator measurement phase began. Slow adherence to some criteria was observed, which led to the need to reorganize the follow-up phase. Responsible nurses were elected in each shift to perform direct and daily supervision, promoting consolidation of the process. These professionals work within the unit to stimulate and solve doubts. It was felt necessary to conduct training through annual punctual groups of each protocol to include new professionals integrated in the unit, as reinforcement of the importance of adhering to the project.

BARRIERS TO IMPLEMENTATION

Due to the complexity of bundle actions, we encounter numerous barriers during all phases of the process. Establishing a daily integrated management of all patients admitted to the ICU and, for all multidisciplinary staff linked to their care, is not an easy task, as it requires adaptations of work processes, as well as numerous human and cultural factors. To facilitate the successful implementation, it is necessary to identify the main barriers present in the institution and elaborate measures for its management from the beginning of the process.⁷

The barriers found were lack of knowledge about the subject by the team, acceptance of routine changes by the care group, fear of increased workload and adverse events, difficulty in interaction between the multiprofessional staff (communication failure and difficulty in providing conduct non-medical staff), costs (adequacy of equipment to mobilize patients, acquisition of more armchairs), scarcity of resources: staff, environment and equipment, long implementation time, as well as the need to keep the work group motivated.

The literature brings notes consistent with the findings *in loco*, where more than 75% of survey participants reported "lack of time" as a possible barrier to making a change in their practice. The nurses who were applying CAM-ICU to all patients did not perceive change or medical appreciation in what they did regarding the patient with delirium. This is observed in daily practice, in which there is need for continuous reinforcement for the Nursing staff, in order to stimulate involvement in non-pharmacological actions to reduce the course of delirium, as well as for prevention.

Some measures can minimize barriers and facilitate process implementation. In this experience, the support of the institutional management is being essential for the success of the implantation, once it is crucial not only for the associated cost, but also for the moral support to the implantation group (empowerment). The multidisciplinary rounds at the ICU were essential for the discussion of the components of the protocols, providing an aligned communication between all professionals who are part of the care.

The collection of indicators can also minimize barriers, as it provides the identification of process failures and adequacy (audit and feedback strategy). Other measures are: the involvement of the entire multidisciplinary staff in the elaboration of protocols, the exposure to suggestions of the large multidisciplinary group before its implementation, the scheduling of periodic training for the care team with more attention to "new" professionals in the institution, use guide for quick consultation of the protocols and motivation of the team involved, based on the appreciation of the work developed by scientific production and exposure of program results.

DISCUSSION

After decades of improvement and technical evolution, intensive care currently faces a major challenge: individualization in the care and treatment of patients. This challenge supports the development of care improvements focused on patient-centered care and humanization.⁸ Another current paradigm of intensive care medicine is improving the quality of life of ICU surviving patients. The conditions that return home are a direct consequence of the quality of care during their ICU stay. The

prevention of delirium and muscle weakness, together with the humanization of care, underpins the actions to improve the quality of life of these patients after ICU discharge.⁹

The ABCDEF bundle emerges as a facilitating tool for delirium diagnosis and prevention. Reducing incidence needs to be considered as an indicator of quality and a target to be achieved, as quality-of-care measures show greater benefit in the studies.^{8,9} The combined effect of PAD recommendations provides the basis for a standard of care. ICU patients, as well as the opportunity to improve care and quality of life of post-discharge ICU patients.

It is observed that the organization of critical patient care is moving towards this type of intervention. In 2018, SCCM published the review of the sedation and analgesia protocol,⁹ with important changes, adding the protocol of early mobilization and sleep hygiene. This reinforces the importance of our work and discussion with the entire intensive care society so that we can achieve excellence in the care of our patients.

Guidelines developed by societies specializing in delirium have assisted in the implementation of evidence-based care and the evolution of teamwork. The proposed change (implementation of protocols) has been progressively accepted by the group, but adherence is not constant, which meets the difficulties described in the literature. Intense efforts, such as continuing education, focus groups, meetings with multiprofessional staff and appreciation of the work performed by medical and Nursing managers, seem to contribute to more team engagement with protocols, reflecting better long-term outcomes for the patient, for the family, and for hospital institutions.

CONCLUSION

Early implementation of comfort and analgesia using minimal sedation and humanization care is a relatively new concept, which has been established in recent years. The implementation of the ABCDEF bundle is a challenge in the Brazilian reality. Numerous barriers previously mentioned add to the condition of a teaching hospital, with high severity patients and communication difficulties between teams, and there is fear of routine changes and adverse events to patients.

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