

ASSESSMENT OF VARIOUS ASPECTS OF USING PROTOCOLS IN INTENSIVE CARE UNITS IN PLOVDIV, BULGARIA

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A – study design, **B** – data collection, **C** – statistical analysis, **D** – interpretation of data, **E** – manuscript preparation, **F** – literature review, **G** – sourcing of funding

ABSTRACT

Background: Since 1950 intensive care has become a separate and independent specialty. Significant technological advances have allowed the Intensive Care Unit (ICU)^s to be monitored through the centralized work of a multidisciplinary team of specialists. ICUs provide cares at different levels of support. To provide patient access to this highly specialized cares, the “Critical care without walls” or “Intensive Care without Borders” theories have emerged, involving reanimation nurses offering highly specialized care and support. Protocols for nurses have been developed, with the aim of facilitating their day-to-day activities, improving outcomes and safety of patients and all staff. Utilizing this concept, the role of intensive care has rapidly expanded over the past 20 years.

Aim of the study: To understand the effectiveness and benefits derived from organisation of the working process.

Material and methods: We used documentary and survey methods and analysed the data using the software package SPSS v. 21.0. Graphics were prepared using Microsoft Excel 2013. Numbers from 1 to 5 refer to the answers “no”, “not really”, “cannot judge”, “closer to yes” and “yes”, respectively.

Results: Nurses’ performance, as an integral part of multidisciplinary ICU teams, is evidence that mortality and morbidity can be improved thanks to the early recognition of patient deterioration and rapid resuscitation. The better healing process is accomplished by optimising the content and evaluation of the desired results, in association with good doctor practices. Respondents’ opinions about outcomes of protocol use differed significantly between professions in regard to making their job easier, improving patient outcomes, providing consistency in care, and preventing patient harm.

Conclusions: A more flexible and standard framework for nurses should be developed to improve quality of care. The rapidly growing lack of ICU nurses in Bulgaria is concerning.

KEYWORDS: protocols, cares, ICU^s, nurses

BACKGROUND

Intensive units provide care at different levels of support for intensive patients [1]. To provide patients with this highly specialized type of care, the “Critical care without walls” or “Intensive Care without Borders” theory has emerged, in relation to reanimation nurses offering highly specialized care and support [2–5]. Protocols for the work of nurses, with the aim of facilitating their day-to-day activities, have been developed to improve outcomes and safety of patients and all staff [6–10]. Following this concept, the role of intensive cares has been rapidly expanded over the last 20

years [11,12]. The performance of nurses, as an integral part of multidisciplinary teams in ICUs is evidence that mortality and morbidity can be improved thanks to the early recognition of patient’ deterioration and rapid resuscitation [13,14]. We wished to study their effectiveness and the benefits for the organization of the working process [15,16].

AIM OF THE STUDY

To assess ICU nurses’ activities’ effectiveness and the benefits of organizing the working process.

MATERIAL AND METHODS

We used documentary and survey methods and analysed the data using the software package SPSS v. 21.0. Graphics were prepared using Microsoft Excel 2013. Numbers from 1 to 5 refer to the answers “no”, “not really”, “cannot judge”, “closer to yes” and “yes”, respectively.

RESULTS

We conducted a survey (shown in fig. 1) of 94 ($Sp = 3.74 \pm 52.81\%$) respondents on the use of work protocols as one of the ways of limiting clinic costs. 42 ($Sp = 3.18 \pm 23.60\%$) responded with full agreement to this statement. Around 20 ($Sp = 2.37 \pm 11.24\%$) of the respondents believed it was impossible ($c^2 = 27.51$, $p < 0.05$, $df = 2$).

Fig. 2 shows that compliance allows a faster and more efficient process of healing according to 57 respondents ($Sp = 3.50 \pm 32.02\%$). 113 ($Sp = 3.61 \pm 63.48\%$) have a rather positive opinion ($c^2 = 8.67$, $p = 0.013$, $df = 2$).

The majority ($Sp = 3.74 \pm 52.81\%$) of the specialists (94) felt that the use of protocols contributed to the elimination of mistakes in the administration of drug therapy (fig. 3). A large proportion (55) ($Sp = 3.46 \pm 30.90\%$) gave an entirely positive answer to this statement, while the rest (9) ($Sp = 1.64 \pm 5.06\%$) were uncertain, and 18 ($Sp = 2.26 \pm 10.11\%$) stated that it would not make much difference ($c^2 = 12.94$, $p = 0.002$, $df = 2$).

DISCUSSION

Protocol use has substantially increased over the past decade. Patient outcomes associated with protocol use have typically demonstrated positive results [1–11]. This is the first study to study the views of interdisciplinary, critical care clinicians in the development, implementation, assessment, and perception of utility of protocols. This information will be useful for institutions developing such protocols and for those institutions encouraging compliance with existing protocols. Both professions indicated that the most important advantage of protocols was improved patient outcomes. Protocol implementation has been demonstrated in the literature to improve mortality and morbidity outcomes [12–14]. Sedation protocols have been shown to decrease the duration of mechanical ventilation and length of stay in hospital [5]. Protocols managing transfusion management, sepsis resuscitation, and ventilator-associated pneumonia have also shown improved outcomes [8,15,16]. Drug protocols were identified as the most frequently used protocol to improve patient outcomes. This is supported by a recent analysis showing that incorporating “sepsis bundles” improved antibiotic use among the heterogeneous studies [16].

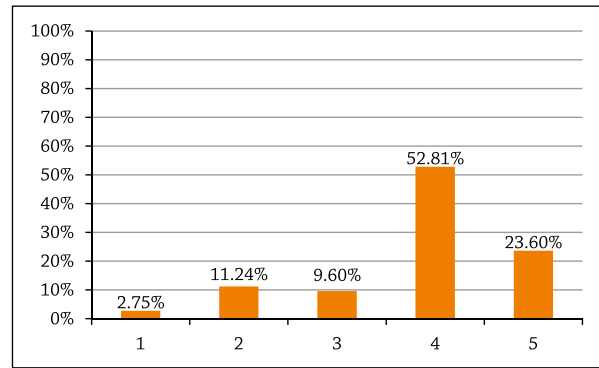


Figure 1. Use of protocols can limit clinic costs.

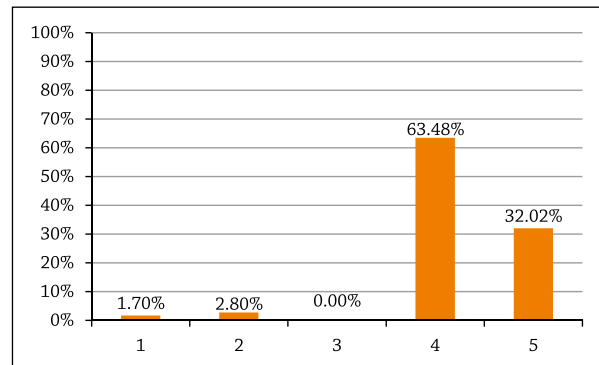


Figure 2. Protocol compliance permits faster and more efficient healing and diagnosis.

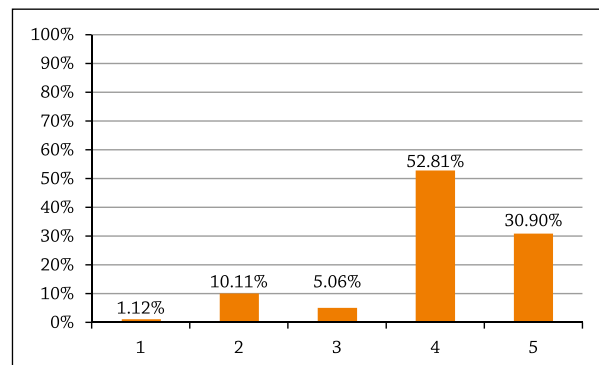


Figure 3. Protocols contributed to the elimination of mistakes in drug administration.

CONCLUSIONS

1. The performance of nurses, as an integral part of multidisciplinary teams in ICUs, is evidence that mortality and morbidity can be improved thanks to the early recognition of patient` deterioration and rapid resuscitation.
2. Improved healing can be accomplished by optimizing the content and evaluation of the desired results, in association with good doctor practices.
3. Ultimately, flexible frameworks for accepted standards of service must be developed, allowing staff to be audited and improving quality of work.

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