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**DEVELOPMENT OF PROTOCOLS FOR DUTIES OF THE NURSE IN INTENSIVE CARE UNITS AND EVALUATION THE EFFECTIVENESS OF THEM**

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**Abstract:** Emergency medical care is one of the fastest growing hospital industries, such as tracing the development process back in time, the results are clear and that is what we could learn for such a relatively short period of time.[1] Intensive care wards and clinics are willing to occupy an increasingly important place, as an essential part of medical institutions all over the world. This difficult process must ensure, that the objectives of the emergency medical care and their recovery will be effectively implemented in future.[2] Advances in treatment` methods in intensive care are dramatic. The process of effective and proper planning of nursing cares has been improved, as important changes had been made, including lower mortality, better communication with patients and their families, as well as improving the teamwork.[3] All that helps to improve the results in the healing process of patients in intensive care units. [4] The main goal is standardization of cares in most of the ICUs in Plovdiv. Other aim is to evaluate the opinion and desires of medical specialists to work with protocols, also the efficiency of usage and activities, which are carried out by nurses in intensive units. On other side we wanted to analyze and compare baselines awareness, motivation and attitude of the nurses to use protocols, and their expectations regarding to modern facilities, that can be provided into their work towards the development of new technologies. We also tried to analyze how protocols, which have been used as a factor in forming of professional skills and habits to the nonexperienced nurses, started to work in ICUs. Documentary and survey methods have been used, data was collected with the software package SPSS v. 17.0 and graphics have been made through the Microsoft Excel '97 programme. The object of the study were nurses from the University Hospital "St. George" KAIL /Intensive Care Unit/ in Plovdiv, who answered to questions from the developed for specific reasons survey. The usage of protocols is one of the successful methods for education and specialized training of nurses, who had no experience working in intensive care units. Usage of protocols requires constantly evolving staff, and the most important advantages of using protocols are efficiency, consistency and safety of the patients and medical staff. The results shows that the use of protocols improves patient outcomes and reduces the costs of the hospitals. Obstacle for their usage could be: lack of awareness, knowledge, average length of patients`stay in the clinics, ets. Protocols can contribute to the standardization of applied nursing cares in intensive care units, not only in Plovdiv, but in other cities in Bulgaria. They can initiate introduction of a new scientific approach, as being the connection between clinical practice and the latest scientific and technology achievements.

**Keywords:** protocols; efficiency; intensive units; nurses; standartization; cares;

**РАЗРАБОТВАНЕ НА ПРОТОКОЛИ ЗА РАБОТАТА НА МЕДИЦИНСКИТЕ СЕСТРИ В ИНТЕНЗИВНО ОТДЕЛЕНИЕ И ОЦЕНКА НА ЕФЕКТИВНОСТТА ОТ ТЯХ.**

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**Резюме:** *Спешната медицинска помощ е един от най - бързо развиващите се болнични отрасли. [1] Напредъкът в терапевтичните способности в интензивните отделения е драматичен. [2] Процесът на ефективно и правилно планиране на сестринските грижи се подобрява, като настъпват важни промени, в това число по - ниска смъртност, по- добра комуникация с пациентите и семействата им, както и подобряване на работата в екип. [3] Всичко това подпомага повишаването на резултатите при оздравителния процес на пациентите в реанимация. [4]*

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**Целта** на настоящето проучване е стандартизиране на полаганите грижи в по - големите интензивни отделения в гр. Пловдив, като се направи оценка на мнението и желанието на медицинските специалисти да работят с протоколи, както и ефективността от използване и внедряването им за дейностите, извършвани от медицинските сестри.

За реализиране на целта си поставихме следните задачи:

- анализ и съпоставка на базовите показатели за информираност, мотивация и нагласа на реанимационните сестри да използват протоколи, както и техните очакванията относно модернизацията и улесненията, които могат да бъдат въведени в тяхната работа, спрямо развитието на новите технологии.
- анализира мястото на използваните протоколи за работа, като фактор за формиране на професионални умения и навици у ново постъпилите медицински сестри, работещи в интензивно отделение.

**Материал и методи:** Използвани са документален и анкетен метод, като данните са обработени с програмния пакет SPSS v. 17.0, а графиките посредством Microsoft Excel' 97. Обект на изследването са медицинските сестри от УМБАЛ „Св.Георги“ КАИЛ в гр. Пловдив. Изследването е проведено в периода 2013-2015г., посредством разработена за целта анкетна карта.

**Резултати и обсъждане:** Използването на протоколи е един от успешните методи за работа и специализирано обучение на медицинския персонал, който няма богат опит с работата в интензивни отделения. Работата по протоколи изисква постоянно развиващ се персонал, като най- важните предимства при използването им са ефикасност, последователност и безопасност на пациентите и персонала. Резултатите показват, че използването на протоколи подобрява оздравителния процес на пациентите и намалява разходите на болничното заведение. Пречки за използването им могат да бъдат: липсата на информираност, познания, средната продължителност на престоя на болните в клиниката и др.

**Заклучение:** Протоколите могат да допринесат за стандартизиране на прилаганите сестрински грижи в интензивните отделения не само в гр. Пловдив, но и в цяла България. Те могат да поставят началото на въвеждане на нов научен подход, като са постоянната връзка между практиката и новите научни постижения.

**Ключови думи:** протоколи; ефективност; стандартизиране; интензивно отделение; медицински сестри; грижи;

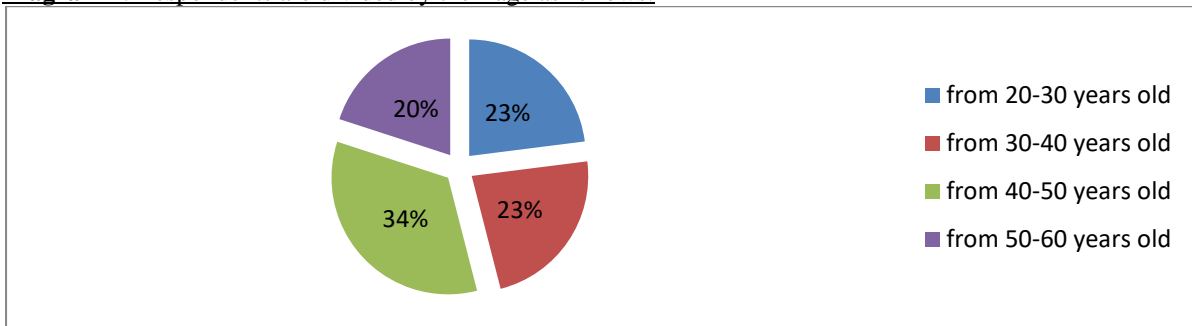
The first ICU (intensive care unit) was created in late 1950s as part of the specialty of emergency medical cares and gradually, rapidly begins its development.[1] This difficult process must ensure, that the objectives of the emergency medical care and their recovery will be effectively implemented in future.[2] Advances in treatment methods are dramatic, but the process of effective and proper planning of nursing cares was improved, as one of the important changes, including lower mortality of the patients, better communication with them and their families, as well as improving teamwork.[3] This helps to improve the results in the healing process of patients in intensive care units.[4]

Objectives of this study are standardization of cares in most of the largest ICUs in Plovdiv; evaluation of the opinion and desires of medical specialists to work with protocols; evaluation of the effectiveness and need to develop, use and implement protocols for activities carried by the nurse in intensive care unit. Also we wanted to analyze and compare baselines awareness, motivation and attitude of the nurses to use protocols during their daily obligations; to examine and compare the expectations of the nurses on modernizations, that can be used into their work, towards the development of new technologies.

Scientific methods, that have been used are: documentary method; questionnaire method; monitoring; psihodiagnostical method- "motivation and emotions"; statistical methods. The data have been analysed by using the software package SPSS v. 17.0 and graphics were prepared by using Microsoft Excel '97 programe. The object of the study were nurses from the University Hospital "St. George" KAIL /Intensive Care Unit/ in Plovdiv, who answered to questions from the developed for specific reference survey.

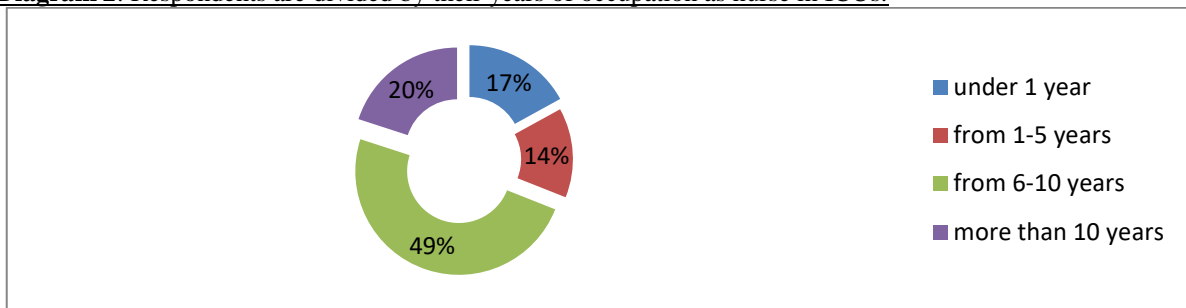
Results and discussion:

**Diagram 1:** Respondents are divided by their age as follows.



Respondents who belong to different age groups, were predominant -from 40 to 50 years and they represents 34% of the them. An equal number are from 20- 30 years old and also 30- 40 years, who represents 23% of the total number of nurses from the survey. The remaining 20% of respondents were between 50- 60 years old. Prevalence of nurses, who have a rich experience in intensive care units, contributes to the positive assessment of protocols and gives more rapid and effective development for young and nonexperienced in intensive care units specialists.

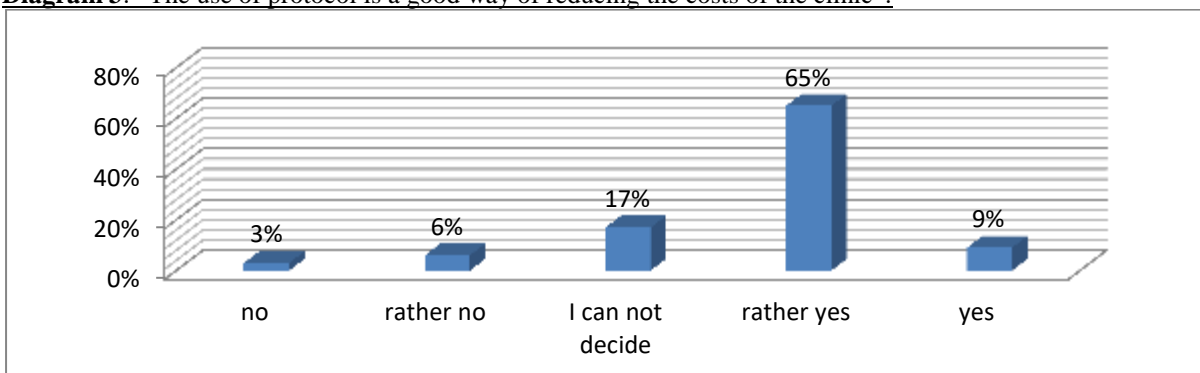
**Diagram 2:** Respondents are divided by their years of occupation as nurse in ICUs.



It was found a positive correlation between respondents and their attitudes to work with protocols. With the increase of their age, the proportion of persons willing to work with protocols also being increased, which is important for their application in future.

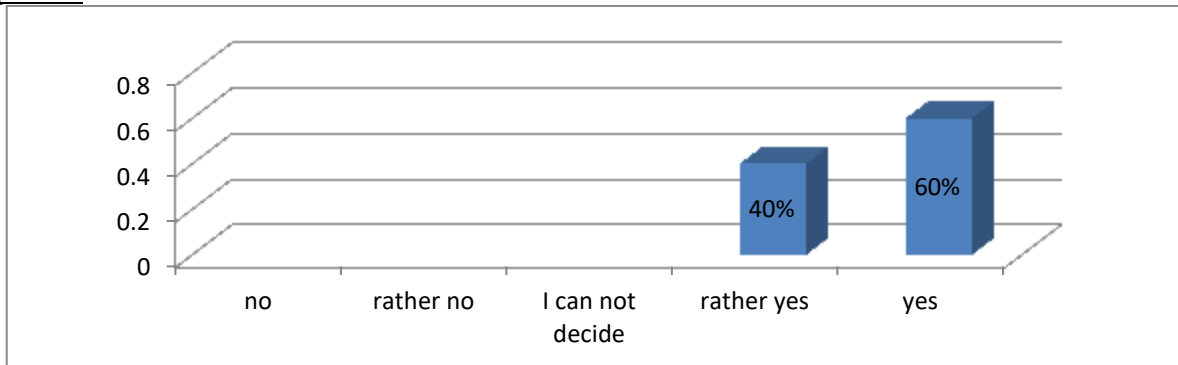
This survey shows that 65% of respondents believe that the use of protocol is a good way of reducing the costs of the clinic, and 9% of them responded with full consent of this claim. Among 6% of them, believe, that it is rather impossible and 3% gave completely negative response to the claim. Around 17% believe, that the question is not in their competence and can not decide.

**Diagram 3:** “The use of protocol is a good way of reducing the costs of the clinic”.



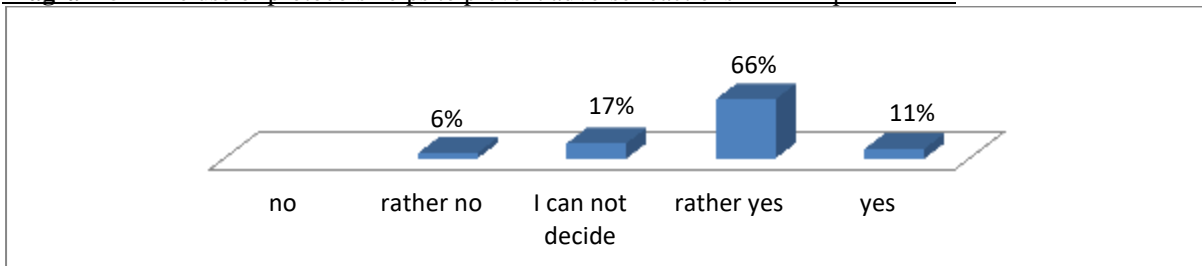
Compliance with the protocols, allows more rapid and efficient way of medical- diagnostic process, according to 60% of respondents and the remaining 40% have rather positive opinion.

**Diagram 4:** “Compliance with the protocols, allows more rapid and efficient way of medical-diagnostic process.”



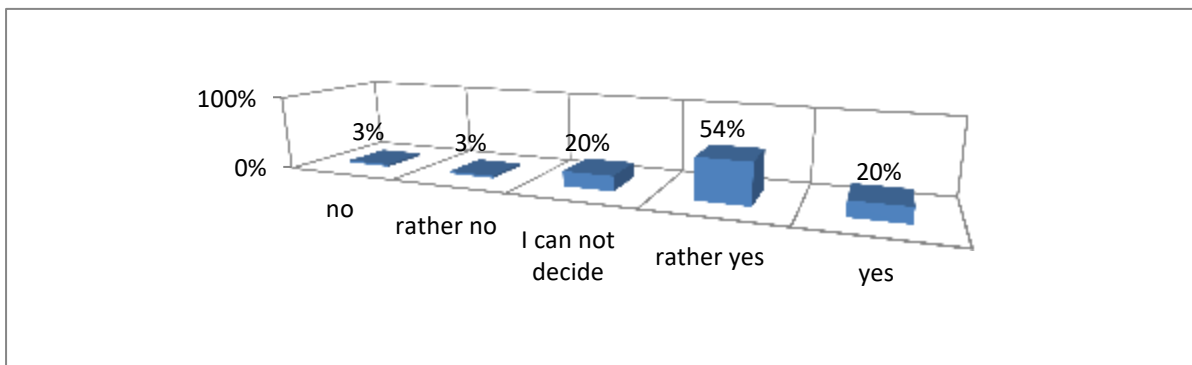
A high percent / 66 % / of the nurses working in intensive care units, believe that the use of protocols helps to prevent adverse reactions and complications. Other 11% were completely convinced. Around 6% believe that the protocols rather would not affect the process, and 17% can not decide.

**Diagram 5:** “The use of protocols helps to prevent adverse reactions and complications.”



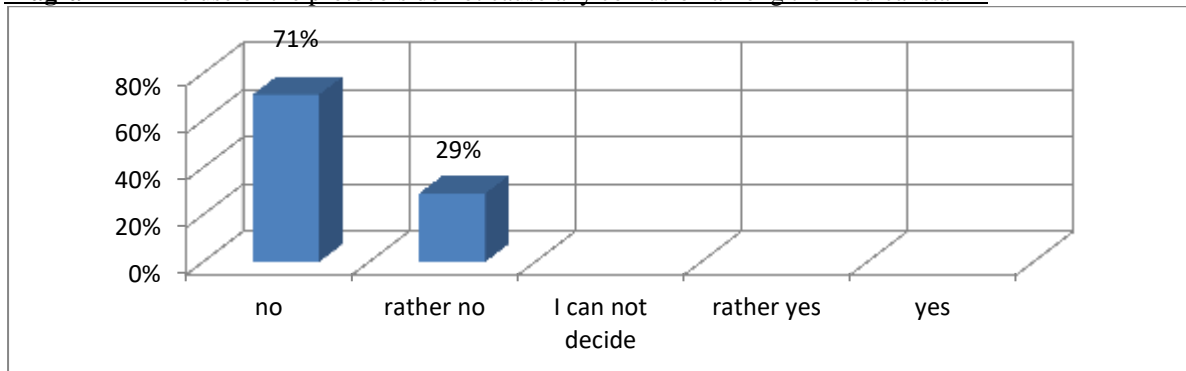
According to 54% of respondents, protocols can prevent mistakes in cares of the patients. More than 20% gave a positive response to that claim, the same number of respondents can not decide and other 3% give negative opinion on this matter.

**Diagram 6:** “Protocols can prevent any mistakes in cares of the patients.”



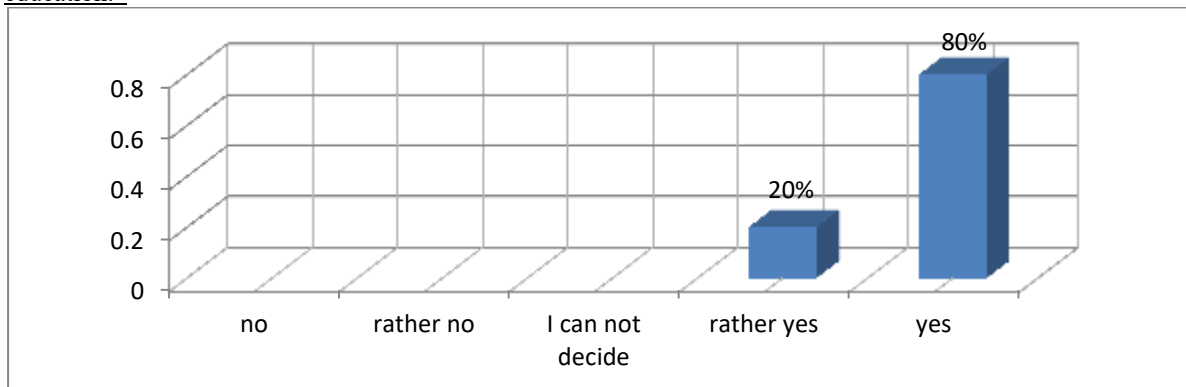
Convincing percentage of respondents / 71% / believe that the use of the protocols is not connected and do not cause any confusion among the medical staff, but rather is beneficial in fulfilling their daily duties.

**Diagram 7:** “The use of the protocols do not cause any confusion among the medical staff.”



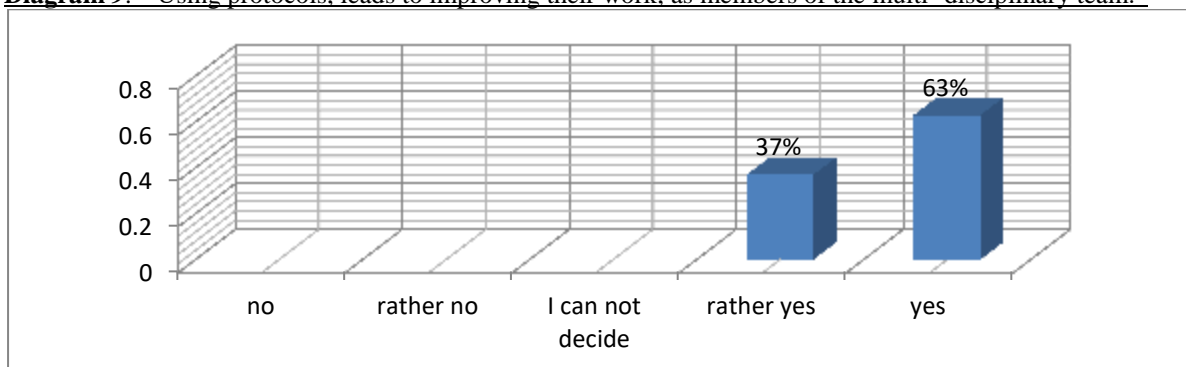
The use of protocols in intensive care is one of the successful working methods for training and education, which have been considered from 80% of respondents. The remaining 20% have a rather positive opinion on that matter.

**Diagram 8:** “The use of protocols in intensive care is one of the successful working methods for training and education.”



By using protocols, 63% of nurses believe that this leads to improving their work as members of the multi-disciplinary team. Around 37% rather support it.

**Diagram 9:** “Using protocols, leads to improving their work, as members of the multi- disciplinary team.”



Conclusions:

- Protocols can contribute to the standardization of applied nursing cares in intensive care units- not only in Plovdiv, but throughout Bulgaria.
- The available protocols can initiate introduction of a new scientific approach to the implementation of nursing cares, as they can be the connection between practice and latest scientific and technological achievements.
- Protocols support more efficiently the healing process of patients.

Better healing process is accomplished by optimizing the content and periodically evaluation of the desired results, connected with the good doctors' practices. Ultimately, there must be development of flexible frameworks for accepted standards of nursing cares, which will allow the staff to be audited, as well as improving the quality of their work.

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