

# Estimation of the declared knowledge of anaesthesiology nurses concerning some chosen procedures and actions being within the scope of professional competence

Grochans E<sup>1\*</sup>, Jurczak A<sup>1</sup>, Wieder-Huszla S<sup>1</sup>, Stanisławska M<sup>1</sup>, Prebendowska A<sup>2</sup>

<sup>1</sup> The Laboratory of Propaedeutics in Nursing, Pomeranian Medical University in Szczecin, Poland

<sup>2</sup> Main Sterilizer Room in Independent Public Health Care Centre (ZOZ) in Stargard Szczeciński, Poland

## Abstract

Together with introducing legal regulations as well as modern standards of postgraduate education, the professional position of a nurse has strengthened and also her responsibility for professional activity has increased. Performing the profession of an anaesthesiology nurse involves necessity of possessing some adequate professional qualifications. The aim of the study was an attempt to answer the question on how the knowledge of an anaesthesiology nurse concerning the activities being within her professional qualifications shapes. The research was carried out in 2005 among 123 anaesthesiology nurses working in some Polish hospitals chosen at random. Method of diagnostic opinion poll was applied and a questionnaire of own authorship was a research tool. Analysing the obtained results the following conclusions have been drawn: 1. The level of knowledge of an anaesthesiology nurses on the activities being within their qualifications is unsatisfactory; 2. Obtaining competence in anaesthesiology nursing involves the necessity of continual raising of qualifications by nurses, especially being on specialization level; 3. A necessity of differentiation between particular competence levels of anaesthesiology nurses during different forms of education should be underlined; 4. Possibility of realization of their competences on a particular level by anaesthesiology nurses is connected with the necessity of improving whole therapeutic team work.

**Key words:** anaesthesiology nurse, professional competences.

## Introduction

Anaesthesiology nursing takes a special place in Polish nursing. As the only one among all nursing branches has its own full legal powers. Performing anaesthesiology nurse profession involves the necessity of possessing some adequate professional qualifications. In order to achieve them a nurse should complete pre- and postgraduate training which is defined by the separate legal acts, and is obliged to continual education throughout all her career. Competences are rights and authorities which enable realisation of tasks depending on the level of qualifications [1]. The aim of the study was an attempt to answer the question on how knowledge of anaesthesiology nurses shapes as far as functions falling within their competences are concerned.

## Material and methods

The study was carried out between April and October 2005 among one hundred and twenty three anaesthesiology nurses working in randomly chosen hospitals in Poland. In the questioned group sixteen respondents completed specialization training in anaesthesiology nursing and intensive therapy, 67 nurses completed qualification course, and 40 nurses did not participate in any form of postgraduate training. In the study method of diagnostic opinion poll was used with a questionnaire as a research tool. The questionnaire consisted of basic specification questions and names of activities, which anaesthesiology nurses with the title of specialist in anaesthesiology nursing can perform unaided, without doctor's order. A questioned nurse marked the activities which, in her opinion, she can perform according to her qualifications.

### \* CORRESPONDING AUTHOR:

Samodzielna Pracownia Propedeutyki Nauk Pielęgniarskich  
Pomorska Akademia Medyczna w Szczecinie  
71-210 Szczecin, ul. Żołnierska 48, budynek 8, Poland  
Tel: +48 914800910; fax: +48 914800905  
e-mail: grochans@sci.pam.szczecin.pl (Elzbieta Grochans)

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## Results

Nurses after obtaining the title of specialist in anaesthesiology nursing and intensive care are not convinced of the competences they gained. Most specialist nurses, i.e. 87% know that they can perform endotracheal intubation in a sudden situation, also the possibility of performing defibrillation was confirmed by 75% of respondents. However, after completing qualification course, the possibility of performing defibrillation was confirmed only by 34% of nurses. 62% of specialists recognised auditory evaluation of breathing activity in a patient as well as estimation of heart dysfunction in EKG image as their competence. What can be striking is that only 56% of them confirmed qualifications to performing EKG examination. Completing qualification course also authorises to performing EKG examinations – only 58% respondents knew about it. Only 25% respondents after specialization knew about possibility of sending a patient to take tests and/or to sampling for bacteriology tests. Only 25% specialists and 22% nurses after qualification course in anaesthesiology nursing and intensive care know that the conferred title authorises them to clinical death recognition. Specialization completion entitles to organizing and running courses in circulatory and respiratory resuscitation – it was confirmed by 62% nurses.

Not many anaesthesiology nurses (specialization – 44%, qualification course – 45%, without any training – 57%) recognise performing pulse oxymetry as well as ordering patient's transportation by nurses (specialization – 31%, qualification course – 7%, without any training – 8%) as activities falling within their competences (see *Tab. 1*).

## Discussion

Anaesthesiology nurses have to fulfil high career development requirements. The necessity of defining competences results from discrepancy between doctors' expectations towards anaesthesiology nurses and legal conditionings of the performed profession [2]. For the time being the legally valid act is the Resolution of Minister of Health and Social Care of September the 2nd 1997 on determination of a range and a kind of preventive, diagnostic, medical and rehabilitation services performed by a nurse independently without doctor's order as well as a range and a kind of such services performed by a midwife unaided. Some chosen professional activities out of a numerous nurse abilities list which are gained by pre- and postgraduate education have been placed there.

As for today the biggest professional independence has been reached by anaesthesiology nurses which is referred to rather reluctantly by anaesthesiologists, although, on the other hand, they entrust magnitude of tasks which according to a binding law belong to them, to a nurse. The reverse of the medal is that according to law in force a Polish nurse has a low occupational status [2-4].

Along with professional independence responsibility for the performed nursing services has been put upon nurses. Apart from legal acts regulating status of a nurse in Poland as well as her pre- and postgraduate education, Resolutions concerning

professional responsibility came into force. It is said that a punishment can be imposed beginning with reprimand to debar her from a right of performing the job for a proved offence [5,6]. As nursing is a relatively young branch of medicine which is legally approved in Poland, for the time being there is lack of publications concerning principles of performing the profession and related rights on different levels of the qualification achieved, apart from mentioned above the list of competences of a nurse working in anaesthesiology and intensive therapy units, which was announced and approved by 1st Congress of Polish Anaesthesiology and Intensive Care Nurses Society in 1999 [2,7,8].

## Conclusions

1. Level of knowledge of anaesthesiology nurses concerning activities falling within their competences is unsatisfactory.
2. Gaining competence in anaesthesiology nursing is connected with the necessity of constantly raising her qualifications, especially on specialization level.
3. The necessity of differentiation of particular competence levels of anaesthesiology nurses during different forms of education should be underlined.
4. Possibility of realization of competences on a proper level by anaesthesiology nurses is connected with a necessity of improving the whole therapeutic team work.

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Table 1. Analyse of tasks realized independently by anaesthesiology nurses depending on qualifications

Tasks realized by anaesthesiology nurses		I		II		III		
		N=16		N=67		N=40		
		n	%	n	%	n	%	
Without postgraduate training	1. Taking surface and central temperature	7	44	35	52	23	57	
	2. Performing pulsoxymetry	7	44	30	45	23	57	
	3. Estimation of peripheral pulse and its features	6	38	36	54	22	55	
	4. Estimation of breathing activity	7	44	33	49	19	48	
	5. Estimation of a patient's skin condition	6	38	35	52	18	45	
	6. Preliminary estimation of injury seriousness and safe transport organization	6	38	21	31	19	48	
	7. Estimation of catheters and drains' location and durability of their fixation	7	44	41	61	24	60	
	8. Taking material for diagnostic tests, according to annex no 1 to Resolution DZ. U. Nr 116	6	38	26	39	18	45	
	9. Management of water balance	6	38	37	55	12	30	
	10. Performing cannulation of peripheral veins	6	38	32	48	20	50	
	11. Restoration of patency in respiratory tract	6	38	34	51	21	52	
	12. Administration of oral, intracutaneous, subcutaneous, intravenous medication, according to doctor's order	6	38	34	51	20	50	
	13. Performing indirect cardiac massage	7	44	43	64	27	67	
	14. Insertion of gastric tube and decompression of its contents	6	38	37	55	27	67	
	15. Urinary bladder catheterisation and removing fixed catheter, according to doctor's order	8	50	36	54	25	62	
	16. Ordering patient's transport	5	31	5	7	3	8	
After specialization	After qualification course	17. Performing EKG	9	56	39	58	-	-
		18. Performing blood tension: arterial and central	8	50	34	51	-	-
		19. Monitoring and estimation of bioelectric heart activity from precordial and auscultation lead	9	56	23	34	-	-
		20. Auscultatory estimation of breathing activity	10	62	28	42	-	-
		21. Estimation of a patient's degree of consciousness	6	38	40	60	-	-
		22. Estimation of a patient's pupils reaction	7	44	39	58	-	-
		23. Estimation of body build and appearance from the point of view of abnormalities	6	38	30	45	-	-
		24. Diagnosis of clinical death	4	25	15	22	-	-
		25. Performing defibrillation	12	75	23	34	-	-
		26. Performing artificial breath	8	50	37	55	-	-
		27. Administration of medication and drip infusions during resuscitation	5	31	33	49	-	-
		28. Performing measurement of gas concentration taking part in breathing (gasometry, capnometry)	7	44	32	48	-	-
	29. Estimation of basic disorders in heart work in EKG image	10	62	-	-	-	-	
	30. Performing puncture of radial and femoral artery to draw blood	7	44	-	-	-	-	
	31. Sending to diagnostic tests, according to annex no 1 to Resolution DZ. U. Nr 116	7	44	-	-	-	-	
	32. Sending to tests and/or taking sample material for bacteriological tests	4	25	-	-	-	-	
	33. Estimation of blood loss	6	38	-	-	-	-	
	34. Estimation of anaesthesia degree in a patient and relaxometry	5	31	-	-	-	-	
	35. Immediate administration of oxygen and oxygen therapy	6	38	-	-	-	-	
	36. Performing endotracheal intubation in sudden situation	14	87	-	-	-	-	
	37. Estimation of readiness of apparatus and medical equipment in anaesthesiology and intensive care therapy	6	38	-	-	-	-	
	38. Estimation of complications and planning preventive actions	6	38	-	-	-	-	
	39. Organizing and running resuscitation training	10	62	-	-	-	-	
	40. Usage and implementing of secure methods in medical team work	6	38	-	-	-	-	

I – nurses with specialization completed; n=16; II – nurses with qualification course completed; n=67; III – nurses without postgraduate training; n=40