

The knowledge of bedsores prevention among Health and Nursing Department students of Medical University of Białystok

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Abstract

Purpose: Despite great advances in 21st century medicine, the problem of bedsores is as important as a couple of dozens years ago. The knowledge of bedsores cause mechanisms of development, risk factors evaluation and prevention are necessary to effectively them.

Material and methods: The aim of our study was the assesment of bedsores prevention knowledge of IIIrd year part-time student nurses at Health and Nursing Faculty of Medical Univesity of Białystok. The secondary aim was to determine factors on which this knowledge depends.

The research was based on questionnaire created for this purpose. The research target were 50 female students working as nurses in various health service units. The study was performed between May and June 2004.

Results: Majority of students (68%) did not take part in bedsores prevention courses. Their knowledge was based on nursing school classes they had and self-education (50%). Many hospitals which employed the students did not implement bedsores prevention standards (58%) and did not create Bedsores Prevention Team (50%).

Conclusions: According to obtained results, there seems to be an urgent necessity to implement comprehensive action towards increasing bedsores prevention knowledge among part-time students.

Key words: bedsores, prevention, standard.

Introduction

Bedsores result from the impairment of blood flow and from mechanical stress to the skin and tissues over a bony area that has been under pressure for a prolonged period. Other important causes are horizontal forces working in parallel to the skin's surface, which make the upper layers of tissue move over the lower layers [1-4]. Excessive exposure to moisture such as sweat, blood, urine or faeces, skin maceration, accumulation of anaerobic products stimulated by emotional stress and vasospastic effects of nicotine also increase the likelihood of bedsores. Thus, many factors are involved in the bedsores etiology [1,4-7]. Almost all patients with limited mobility, especially over long periods of time, are prone to bedsores. Their creation is further enhanced by the following factors: patient's inability to change position, patient's awareness state and activity, poor nutrition, incontinence of urine and faeces, diabetes, some diseases treated with immunosuppresants [3,6,8,9]. Bedsores are characteristic for patients of the following wards: Neurology, Neurosurgery, Intensive Care, Orthopedic. Areas especially exposed to bedsores are: lower back, ischiadic tubers, trochanters, heels and ankles [1,5,10-12].

The basis of modern nursing is the prevention of bedsores. It requires the knowledge of pathological process, instant hazard recognition, and implementation of modern prevention methods. Obviously, bedsores are easier to prevent than cure [7,12-16].

Standards aiming at improving the quality of service have been steadily introduced over years. They concern the bedridden and immobilized patients and are based on nursing documentation using Northon, Douglas, CBO Bedsores Hazard Classifications and comprehensive preventive actions [9-11,17]. Effectiveness and feasibility depend on cooperation of all persons involved in the therapeutic process and the level of their knowledge and skills.

The current trend to improve patients' well-being depends on patients' satisfaction from nursing and the satisfaction of the personnel. A patient with high bedsores hazard who leaves the

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Received 17.01.2005 Accepted 05.02.2005

Table 1. Action taken at the first sight of bedsore wound

Actions	Number	%*
Frequent repositioning	45	90
Use of items that help reduce pressure	45	90
Relieving the pressure in that area	40	80
Using dressing on the wound	25	50
Recording the event (data)	10	20
Informing the doctor	10	20
Use of 10% NaCl solution on the wound	5	10
Application of ointment with antibiotic	2	4

* Responses do not sum up to give 100% because the polled persons could give more than one answer

hospital without any wounds will truly appreciate the quality of service. Consequently, positive attitude of patients will motivate the personnel and increase their preventive efforts. [2,18].

The aim of our study was to assess bedsores prevention knowledge among nurses and to determine factors on which levels of the their knowledge depend.

Material and methods

The study was performed in 2004 and the research target were 50 female students of IIIrd year Nursing Studies at Health and Nursing Faculty of Medical Univesity of Białystok. The students' age ranged from 25-40 years, with the average of 33.4 years. The nurses worked in various inpatient health service units and hospital wards such as: Intensive Care Units (28%), Surgical Department (16%), Oncology Units (10%), Social Assistance Houses (22%). Most frequently (72%) they were ward nurses with at least 5 years of work experience.

The research tool was originally prepared questionnaire consisting of 37 open questions concerning:

- knowledge of bedsore causes,
- knowledge of bedsore prevention,
- bedsore prevention training,
- organization of preventive measures in hospitals,
- hospital equipment: agents and devices.

Results

The nurses knew the term "bedsore", more then 90% of them could correctly define the term, the rest gave incomplete definition. There were no wrong answers.

According to the polled, bedsores most frequently appear in the area of coccyx (74%), trochanters (60%) and heels (58%).

As the main causes, the nurses mentioned: prolonged immobility (100%), long-lasting mechanical stress (80%), and improper body hygiene (58%). The nurses seemed to know less about the factors relevant to patients' state, like: limited mobility (64%), cachexia, hypoproteinaemia (50%), impurity (40%). The presence of the above factors make the bedsores creation easier.

The specially designed classification helps the assessment of bedsore hazard. Among the studied group, 80% of nurses does

Table 2. Preventive equipment and medicaments known to the polled nurses

Equipment and medicaments	Number	%*
Anti-bedsore mattress	35	70
Cushions, Pads, etc.	15	30
Adjustable beds	2	4
Pressure relieving silicon gels	2	4
Talc/Alantan	39	78
Cosmetic olive	10	20
PC30V	4	8
Body balms	5	10
Application of grease	20	40
Spirit	25	50
Cleansing agents	7	14

* Responses do not sum up to give 100% because the polled persons could give more than one answer

not know any classification. The rest knows only Douglas and Northon classification. More than half of them (58%) does not know the stages according to wound severity.

Preventive measures mentioned by the studied group included: greasing (94%), repositioning of the patient (78%), ensuring personal hygiene (72%), skin moisturizing (50%), taping (40%) and application of talc (40%). The bedsores treatment methods are: frequent repositioning of patient (90%), increasing patient's comfort (90%), decompression of wound (80%), dressing the wound (50%) in the opinion of the studied group (Tab. 1).

Among many means and drugs used in bedsore prevention, the most popular and widely used remain: talc, Alantan (78%), anti-bedsore mattress (70%) and spirit (50%). It is puzzling that a small fraction of the studied group mentioned modern means like PC30V (8%), adjustable bed (4%) or pressure relieving gels (4%) (Tab. 2). More than a half of the polled said that there are not enough devices and medicaments at their work.

Asked to self-evaluate their knowledge concerning bedsore avoidance, more than a half of the polled (54%) evaluated it as insufficient.

According to the polled, the main source of knowledge is the Nursing School (50%) and self-education (38%). Just a fraction benefited from courses (4%), training, or conferences (8%). All polled were interested in learning more about the subject.

Only a small part of the studied group stated that at their place of work there exists Bedsore Preventive Team (10%), Bedsore Assistant (18%), or a person responsible for undertaking preventive measures in the ward (24%). These results are probably closely linked with the lack of suitable preventive standards, only 22% confirmed existence of such. In 68% of units which employed the polled group there are no bedsore avoidance workshops (Tab. 3).

Discussion

Available literature is very detailed but concern mostly about bedsore avoidance and prevention methods in different bedsore wound stages [2-6,8-14,17]. There are not, however, many

Table 3. Prevention organization and bed sore treatment at the workplace of the polled nurses

Organization structure	Yes		No		Don't know	
	Number	%	Number	%	Number	%
Anti-bed sore team	5	10	25	50	20	40
Bed sore assistant	9	18	28	56	13	26
Bed sore assistant's co-worker in the ward	12	24	38	76	0	0
Bed sore prevention standard implementation	11	22	29	58	10	20

researches on bed sore prevention directed to nurses [1,7,15,16, 18,19-21]. The topic is discussed in Ślusarska's research [19]. Studying nurses' knowledge she researched 130 nurses working in various health units in the city of Lublin. Similar research had been performed by Pawlas et al. [20] on the group of 26 nurses working at Neurosurgery Ward in the city of Bydgoszcz.

The research showed that nurses are familiar with the term "bed sore" and are aware of the causes. Their knowledge on comprehensive modern prevention was insufficient, though. The conclusion was that they base on knowledge acquired at Nursing School but do not update it. Ślusarska [19] had similar conclusions, pointing out that none of the units which employed the nurses introduced bed sore preventive standards. On the other hand, the research conducted by the team in Bydgoszcz proved good knowledge of bed sore prevention among local nurses [20]. It is significant that 100% of them confirmed the introduction of bed sore prevention standards at their workplaces. By comparison, in our research only 22% of polled made such confirmation. Research conducted at The Intensive Care Ward by Walkowiak and Koper [21] proved existence of close link between the introduction of preventive standards and the service quality.

This research confirms Ślusarska's [19] results and shows that the greatest obstacle on the way to proper prevention is lack of medicaments and devices. According to the team from Bydgoszcz, it is the lack of qualified personnel that determines the quality of bed sore prevention [20].

Year 1995 in Poland marks the beginning of bed sore prevention program implementation. The National Nursing Consultant issued regulations that were to be observed in hospital health service. The regulations imposed creation of bed sore prevention teams, registration of bed sore hazard patients and bed sore wounds patients, assessment of bed sore hazard among new patients, use of determination procedures concerning methods, means, devices in bed sore prevention, and education of patients [22].

Our results show that only a few units employing polled nurses created Bed sore Prevention Teams or appointed a person responsible for bed sore prevention in the ward. Even in hospitals where such units were organized there is a relatively large group of people unaware of their existence. What is more, the main problem seems to be lack of suitable medicaments and devices used in bed sore prevention. The patients with bedsores are registered in the wards but there are no individual records of each patient. Kruk-Kupiec [18], who conducted a similar research among 93 students, had comparable results.

Conclusions

1. The level of knowledge among studied nurses on bed sore prevention is insufficient.
2. This is probably caused by insufficient number of units where preventive actions are coordinated by suitable organizations or persons, and insufficient number and frequency of workshops and lack of hospital training on modern preventive measures and techniques.

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