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Knowledge concerning the nursing staff hospital-acquired infections in the prevention and transmission paths microorganisms living in the hospital environment

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Wiedza personelu pielęgniarskiego dotycząca zakażeń szpitalnych w zakresie profilaktyki oraz dróg transmisji drobnoustrojów bytujących w środowisku szpitalnym

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Streszczenie

Wstęp: Poziom wiedzy w zakresie tematyki zakażeń związanych ze służbą zdrowia jest bardzo istotnym elementem, wpływającym na zdrowie oraz życie pacjentów a także pracującego personelu medycznego obejmującego cały zespół interdyscyplinarny. W poszczególnych etapach procesu pielęgnowania, który składa się z rozpoznania, planowania, realizacji oraz oceny, pojawia się problem zakażeń szpitalnych.

Cele pracy: Celem badania jest ocena poziomu wiedzy personelu pielęgniarskiego z zakresu zakażeń szpitalnych, profilaktyki oraz dróg transmisji drobnoustrojów.

Materiał i Metoda: Badanie przeprowadzono w okresie od 01.01.2017-01.06.2017 w Wojewódzkim Szpitalu Zespolonym w Kielcach. Badania były dobrowolne, a osoby biorące udział wyraziły zgodę na uczestnictwo w nich. .Badenim objęto grupę 92 (100%) osób z kadry pielęgniarskiej. Były to kobiety 96,65% (n=88), oraz mężczyźni 4,35% (n=4). Badanych poinformowano o anonimowości przeprowadzanych badań. Posłużono się metodą sondażu diagnostycznego, wykorzystując do tego autorski, anonimowy kwestionariusz ankiety składający się z 26 pytań, który opracowano na podstawie najnowszych doniesień z artykułów naukowych dotyczących tematyki zakażeń szpitalnych.

Wyniki: Badania własne wykazały zróżnicowany poziom wiedzy na temat zakażeń szpitalnych wśród personelu pielęgniarskiego. Ankietowani nie znają znaczenia mycia rąk w profilaktyce zakażeń szpitalnych. Alarmującym faktem jest, że tylko 64,13% (n=59) osób biorących udział w badaniu zapytana o najczęstsze źródło zakażeń szpitalnych odpowiedziało, iż jest to „bezpośredni kontakt, najczęściej przez ręce w czasie wykonywanych zabiegów pielęgnacyjnych i leczniczych". Personel pielęgniarski biorący udział w badaniu zdaję sobie sprawę z konieczności organizacji szkoleń podnoszących wiedzę z zakresu zakażeń szpitalnych. Ankietowani zapytani o

konieczność organizowania szkoleń dotyczących profilaktyki zakażeń w miejscu pracy w 84,78% (n=78) odpowiedzieli, iż istnieje taka konieczność.
Wnioski: Poziom wiedzy personelu pielęgniarskiego jest mocno zróżnicowany. Istnieje pilna potrzeba podjęcia wszelkich działań edukacyjnych, szkoleniowych wpływających na podniesienie poziomu wiedzy pielęgniarek w tym obszarze. Istnieje potrzeba wprowadzenia obowiązkowych i cyklicznych szkoleń wewnątrzszpitalnych czy wewnątrzoddziałowych, które podniosą poziom wiedzy personelu pielęgniarskiego. Istnieje potrzeba modyfikacji programów nauczania w toku kształcenia pielęgniarek, celem modyfikacji treści dotyczących zakażeń szpitalnych co pozwoliłoby na zwiększenie wiedzy i świadomości personelu pielęgniarskiego.
Słowa kluczowe: zakażenia, personel pielęgniarski, poziom wiedzy
Summary
Introduction: The level of knowledge in the filed of infections associated with health care is a very important element affecting the health and lives of patients and medical staff working covering the entire interdisciplinary team. In the various stages of the nursing process, which consists of diagnosis, planning, implementation and evaluation, there is the problem of hospital infections.
Objectives of work: The aim of the study is to assess the level of knowledge of nursing staff in the field of hospital infections, prevention and routes of transmission of microorganisms.
Material and Method: The study was conducted in the period from 01.01.2017-01.06.2017 in the Regional Hospital in Kielce. The research was voluntary and those involved agreed to participate in them. The study included 92 (100%) of the nursing staff. These were women 96.65% (n = 88) and men 4.35% (n = 4). The subjects were informed about the anonymity of the research. Method was used diagnostic survey, using the author, anonymous questionnaire consisting of 26 questions, which was developed on the basis of the latest reports from scientific articles on the subject of nosocomial infections.
Results: Our study showed different levels of knowledge of hospital infection among nursing staff. The respondents do not know the importance of washing hands in the prevention of nosocomial infections. Alarming is the fact that only 64.13% (n = 59) of those participating in the survey asked about the most common source of hospital-acquired infections answered that it is "direct contact, usually by hand during the performed treatments and medicines." The nursing staff involved in the study I am aware of the need for training organization to raise knowledge of hospital infections. Respondents asked about the need to provide training for the prevention of infection in the workplace 84.78% (n = 78) responded that there is such a necessity.
Conclusions: The level of knowledge of nursing staff is highly diversified. There is an urgent need to take all the educational, training influence to raise the level of knowledge of nurses in this space. There need to introduce mandatory training and regular in-hospital, which will raise the level of knowledge of nursing staff. There need to change the curriculum in the course of nursing education, to modify the content on hospital infection which would increase the knowledge and awareness of nursing staff.
Keywords: infection, nursing staff, the level of knowledge

Introduction

Modern medicine alongside numerous achievements manifested in the form of modern technology carries a number of negative consequences in the form of steadily rising proportion of infections in the hospital ward. According to the latest analysis of the European nosocomial infections are a direct cause of death in approximately 1% of patients, and indirectly about 10%. In Poland, the current law is the Law of 05.12.2008r. for preventing and fighting infections and infectious diseases in humans (OJ 294, pos. 1570) with numerous additions, introduced in 2012.[1]The law says about having to learn the general phenomena which are linked to nosocomial infections. This act shows the mechanisms, a number of conditions and the impact of infection on the quality of care at the hospital. The Act places a strong emphasis on the role of infections as an indication generator costs of treatment and hospitalization. Epidemiological indicators of hospital infections are the basis for assessing the quality of work of each hospital and affect the

[1] Act of 05.12.2008 for preventing and fighting infections and infectious diseases in humans (OJ 294, pos. 1570).

possibility of the hospital accreditation, which is an eloquent prestige status therapeutics. This act introduces a definition of hospital infection. Nosocomial infection is an infection that occurred in connection with the provision of healthcare services, where the patient does not remain at the time of the provision of health.[2]The infection should be identified clinically and laboratory-confirmed, regardless of whether the microorganism that caused it is endogenous or exogenous origin. The incidence of nosocomial infections, according to research conducted by the World Health Organization is in the range from 3% to about 10%, and is different in different countries,[3]. This is due to many factors, eg. A reliable registration of infections, as well as their analysis by a unified scheme. One of the most important elements included in the prevention of nosocomial infections is their uniform and reliable control system. The registration of hospital infection plays a role epidemiological nurse. Infection Control Team involved in their supervision, as well as registration[4]. In Poland, the incidence of nosocomial infections is blisko15% of all infections. Annually due to hospital-acquired infections die about 10 000 patients. Infections result in worsening of the underlying disease, greatly prolong hospitalization and effect an increase in the cost of treatment[5.]

Aim

The aim of the study is to assess the level of knowledge of nursing staff in the field of hospital infections, prevention and routes of transmission of microorganisms.

Material and methods

The study was conducted in the period from 01.01.2017-01.06.2017 in the Regional Hospital in Kielce. Respondents informed about the anonymity of the research. Method was used diagnostic survey, using the author, anonymous questionnaire, which was developed on the basis of the latest reports from scientific articles on the subject of nosocomial infections. The questionnaire consisted of two parts. The first part of the questionnaire consisted of eight questions, which concerned the socio-demographic data such as gender, age, place of residence and the types of forms of education that have been completed by the respondents. The second part consisted of 26 questions of open and closed, that directly checked the level of knowledge of nurses surveyed. Each of the questions are assigned numerical scores. The correct response is assigned 1 point, improper or no response 0 points.

[2] Act of 05.12.2008 for preventing and fighting infections and infectious diseases in humans (OJ 294, pos. 1570).
[3] Harris A, Samore M, Nafziger R. et al. A survey on handwashing practices and opinions of healthcare workers. J Hosp Infect 2000; 45: 134-145.
[4] Creedon S. Healthcare workers' hand decontamination practices: compliance with recommended quidelines. AdvNurs J 2005; 51: 230-236.
[5] Heczko PB, J. Mach-Wójkowska Nosocomial infections. Handbook for infection control teams. PZWL, Warsaw 2009.

Results

Qualitative and quantitative analysis of the collected material allowed to complete the order. For statistical calculations used in Office Excel 2007. The study included a group of 92 (100%) of the nursing staff. These were women 96.65% (n = 88) and men 4.35% (n = 4) with a different type of education (secondary, higher-level undergraduate and master level). Respondents differed from each age. The largest group consisted of individuals between the age of 21-30 years who were 39.13% (n = 36) and from 31-40 years of age who were 37.96% (n = 34). The smallest group tested was the nursing staff located in the age group over 50 years of age 2.17% (n = 2), between the ages of 41-50 years of age was 21.74% (n = 20). The obtained results show that more than half of the respondents were living in large cities 64.13% (n = 59). Located in over 100 thousand. residents living 42.39% (n = 39) tested below 100 thousand. 21.74% (n = 20), whereas in the countryside only 35.87% (n = 33). Seniority in a nurse / nurse ranging from 0-10 years could boast of 54.35% (n = 50), only 2.17% (n = 2) surveyed have a length of service within the range of 33- 43 years, 9.78% (n = 9) had a length of service of respondents in the range 22-32 years, 33.70% (n = 31) had surveyed seniority in the range 11-21 years. Nursing staff taking part in the survey were asked about the number of forms of education, which were completed in the course of working life, for example. Specialized courses, qualification, specializations. The results obtained indicate that most respondents as much as 68.48% (n = 63) completed forms of learning 0-5, 25% (n = 23) completed 5-10 forms of learning, only 6.25% (n = 6) did not complete any form of education. None of the respondents had completed more than 15 forms of education.

The respondents' answers to the 26 questions in writing with the knowledge of hospital infections. Each question is assigned a certain number of responses, including only one correct. The results obtained by the participants were counted in quantitative terms, and are further illustrated in the tables and / or graphs.

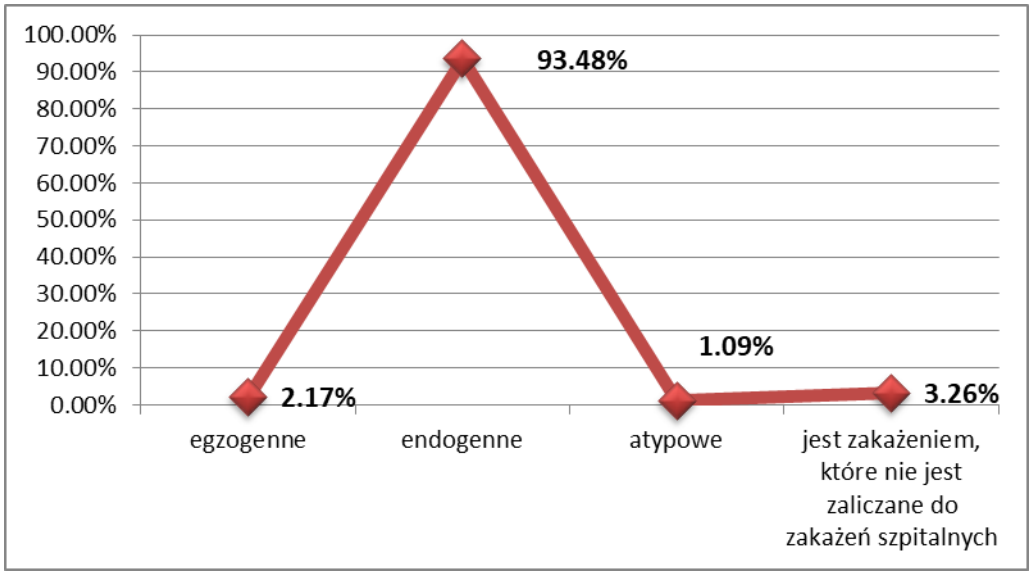

Figure 1. Infection caused by the patient's own flora of this infection? (Please indicate one of the answers).

The results show that most of the tested nursing staff has knowledge of the types of infections, since up to 93.48% (n = 86) indicated that the infection caused by the patient's own flora endogenous infection, only 2.17% (n = 2) indicated that it is exogenous infection. Responses other granted only 5.43% (n = 12) tested.

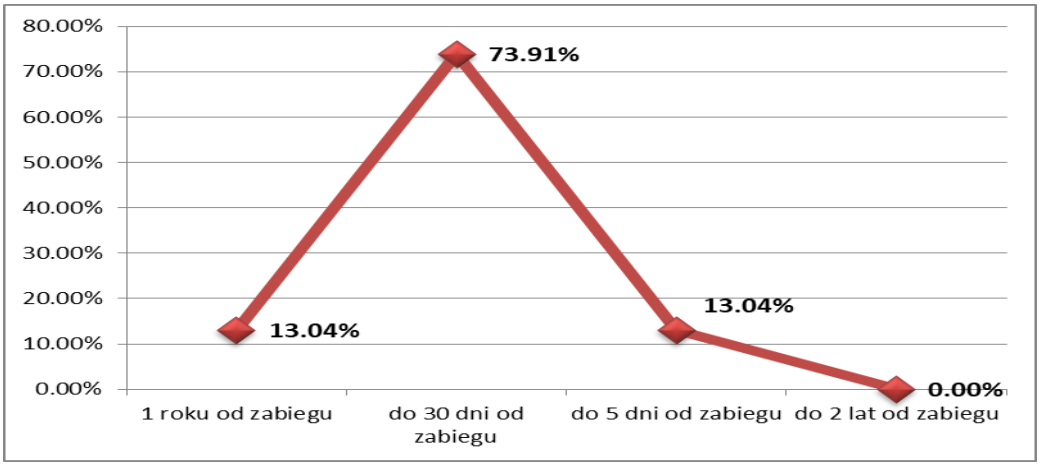

Figure 2. Infection of surgical site without implantation is infection, which appears to (Please indicate one of the answers).

The respondents asked about the time in which infection may develop surgical site without implantation replies, it is a period of 30 days after surgery performed - the answer was given by 73.91% (n = 68) nurses. Few people among the respondents, because only 13.04% (n = 12), pointed answer: "five days after surgery" or answer "one year after surgery." Response "to two years after surgery" did not identify any of the people surveyed. A study shows that the nursing staff, the majority had knowledge of the subject surgical site infections, the so-called. OF MO.

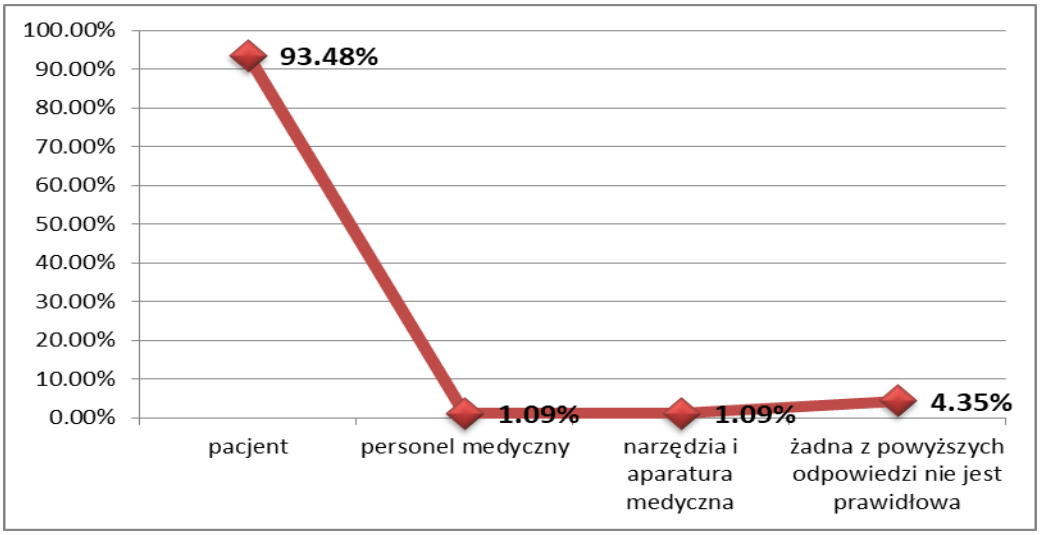

Figure 3. The source of the patient's endogenous nosocomial infections is (Please indicate one of the answers).

On the question of "Who or what could be the source of the patient's endogenous nosocomial infections?" Respondents answer: "patient" 93.48% (n = 86) of respondents, only a few respondents indicated that other responses. Only 1.09% (n = 1) simultaneously from the respondents indicated answer, "medical staff" and: "tools and medical equipment." 4.35% (n = 4) indicated response, "none of the above is not correct."

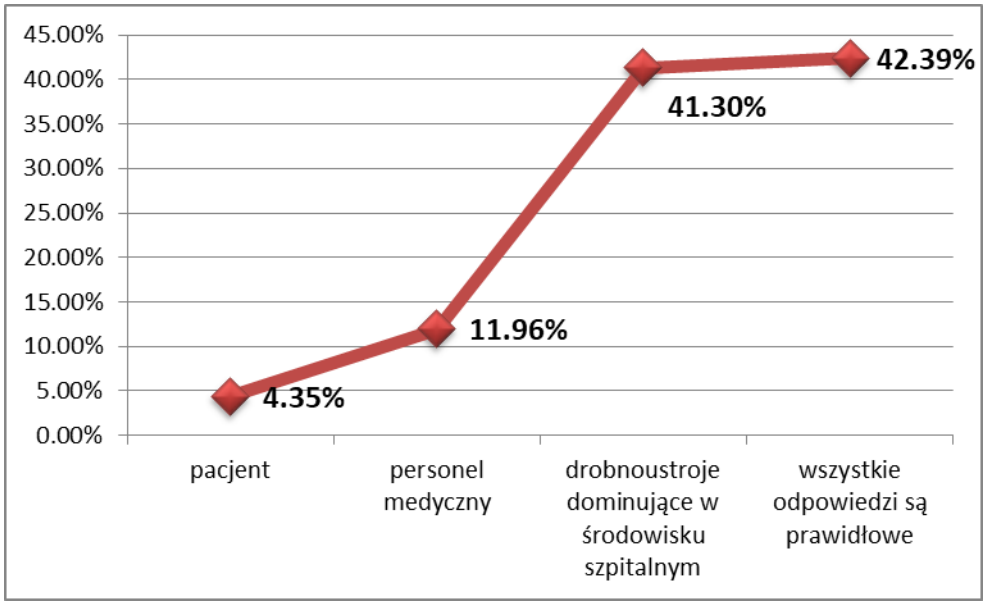

Figure 4. The source of infection is exogenous (Please indicate one of the answers).

Respondents asked about the source of exogenous infections have varied sentence, and knowledge was varied and low. From the responses it shows that only 41.3% (n = 38) of respondents have knowledge about the sources of exogenous infection. A disturbing fact is that 42.39% (n = 39) of those indicated in the answer: "All answers are correct."

Table 1. The areas most frequently colonized human microbiota are (Please indicate one of the answers).

The areas most frequently colonized human microbiota are (Please indicate one of the answers):	n	%
1. colon, oral cavity, vagina, and skin	82	89.13%
2. the oral cavity, urethra, conjunctiva of the eye	7	7.61%
3. nasal cavity, pericardium, lung, penis	0	0,00%
4. none of the above is not correct	3	3.26%

Surveyed were asked the question "Which areas are most numerous human colonized by bacterial flora?" The answers given by the nursing staff were satisfactory, up 89.13% (n = 82) responded that it is "the large intestine, mouth, vagina and skin "only 3 people showed response:" none of the above is not correct ", 7 persons indicated that it is" mouth, urethra, conjunctiva of the eye. "

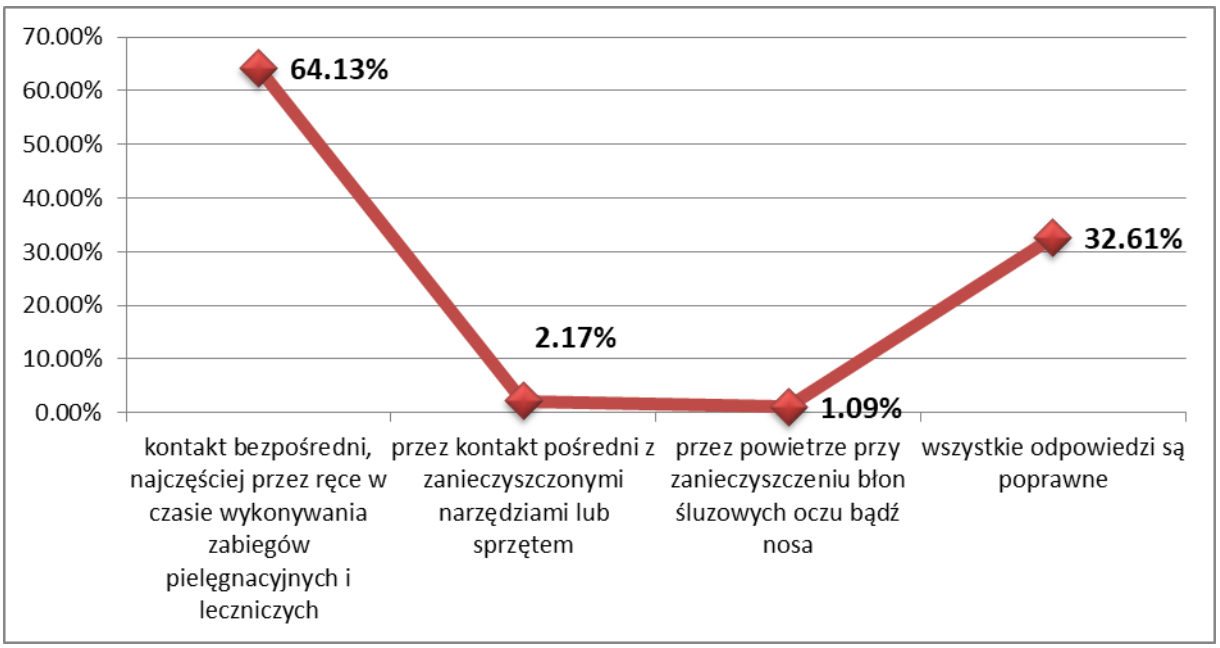

Figure 5. The most common routes of infection are (Please indicate one of the answers).

The most common routes of infection are? Alarming is the fact that only 64.13% (n = 59) of those participating in the survey answered that it is "direct contact, usually by hand during the performed treatments and medicines." This response should provide 100% (n = 92) surveyed. It is elementary, and one of the most important principles of prevention of nosocomial infections. Other responses suggested in the question, are the starting point for the development of nosocomial infections, but the most common source of infection in the hospital environment are the hands of staff. Hand hygiene behavior of the methods and techniques of washing is the best method of prevention of transmission of microorganisms. The skin flora of hands is permanent and transitional. Hand hygiene is extremely important and essential element of the prevention of infections.

Table 2. Washing your hands prevents?

Washing hands protects against:	n	%
1. borne infections airborne dust	8	8.70%
2. the cross-infection	37	40.22%
3. interruptions tissue infections	7	7.61%
4. none of the answers is correct	40	43.49%

Washing your hands prevents? To this question up to 43.49% (n = 40) responded that none of the responses is correct. This is an extremely disturbing fact testifying to the lack of elementary knowledge of the nosocomial infections. 40.22% (n = 37) indicated answer "cross-contamination", 8.7% (n = 8) "transmitted infections airborne dust", 7.61% (n = 7) "infections discontinuity of tissue."

Table 3. The most important way to prevent infection is a hospital.

The most important way to prevent hospital infections is:	n	%
1. antibiotic according to antibiogram	3	3.26%
2. the shortest possible duration of stay in hospital	32	34.78%
3. hand washing	56	60.87%
4. none of the above	1	1.09%

Studied nursing staff in 60.87% (n = 56) indicated that the most important way to prevent hospital infections is handwashing, 34.78% (n = 32) indicated a person "shortest length of stay in hospital," 3.26% (n = 3) responded "antibiotic according to antibiogram," only one person stated that "none of the proposed answer is correct."

Table 4. Flora are fixed on the skin microorganisms.

Flora constant microorganisms on the skin are:	n	%
1. coagulase negative Staphylococci and Corynebacteria	64	69.57%
2. clostridium difficile, Staphylococcus aureus	13	14.13%
3. enterococcus faecium, Mycobacteriumtuberculosis	6	6.52%
4. certain fungi	9	9.78%

Fixed to the flora includes bacteria that live and reproduce in the surface layers of the skin. In the constant flora stands out: coagulase-negative staphylococci and corynebacteria. The respondents asked for microorganisms inhabiting constantly coatings skin of man in 69.57% (n = 64) indicated the coagulase negative Staphylococci and Corynebacteria.

Table 5. surviving microorganisms on the skin specified period of time are acquired through contact with the patient, carrier or objects in a hospital environment which constitutes the flora?

Surviving microorganisms on the skin specified period of time are acquired through contact with the patient, carrier or objects in a hospital environment which constitutes the flora:	n	%
1. the solid	15	16.30%
2. transient	72	78.26%
3. occasional	4	4.35%
4. none of the above is not correct	1	1.09%

On the question of microorganisms that survive on the skin specified period of time they are acquired through contact with the patient, carrier or objects in a hospital environment which constitutes the flora? Responses "transient" granted up to 78.26% (n = 72) surveyed, only 16.3% (n = 15) indicated that this is a permanent flora. Alarming is the fact that as much as 4.35% (n = 4) subjects indicated a response that it is flora occasional, wherein the term "occasional" in medical formulations the range of hospital infections not occur. One person 1.09% replied that none of the answers is correct. Medical personnel must not forget that the transient flora pathogens surviving form coatings on the skin a specific time. Pathogens in transient flora are acquired through contact with the patient.

Table 6. Decontamination of the skin obtain hands in the process?

Decontamination of the skin obtain hands in the process	n	%
1. a cleaning and disinfecting	71	77.17%
2. sterilization and disinfection	12	13.04%
3. the chemical disinfection and cleaning	7	7.62%
4. sterilization and disinfection	2	2.17%

Decontaminate the skin of the hands is achieved during the washing process or / and disinfection. Both methods are used in conjunction with surgical hand washing. By thorough hand washing with soap and water is removed 90-99% of microorganisms. On the hands should not be jewelry, nails should be cut short, not covered with varnish. Decontamination of the skin obtain hands in the process? This question up to 77.17% (n = 71) patients responded "cleaning and disinfection" only 2.17% (n = 2) responded "sterilization and disinfection".

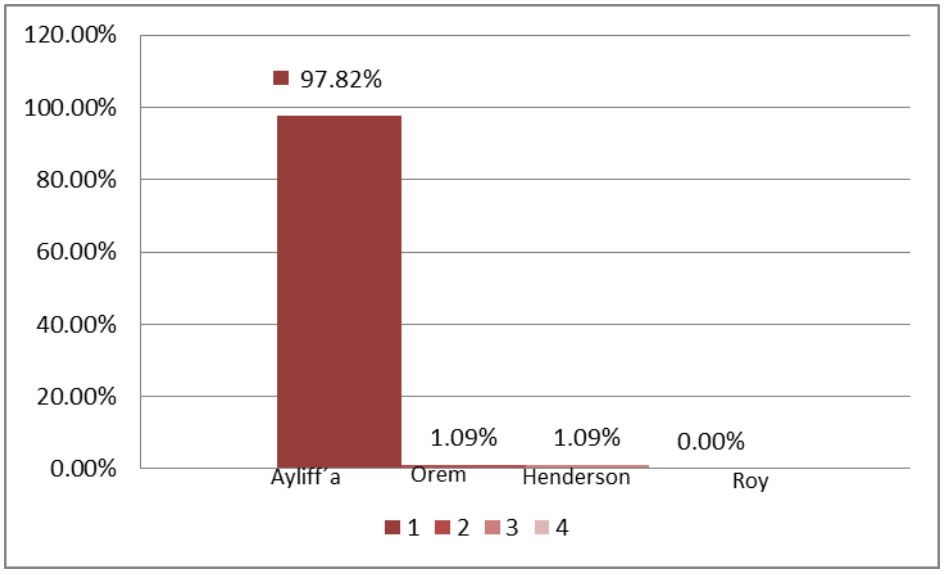

Figure 6. Detailed washing the entire surface of the hand to use hand washing technique by.

The respondents mostly because until 97.82% (n = 90) indicated a response "Ayliff'a" which is the correct answer. Only two people from the respondents indicated incorrect answers. Thorough washing of all use of hand to hand washing techniques diagram Ayliffe'a.

Table. 7 In which case we say that the phenomenon is not a disease hospital infection.

In which case we say that the phenomenon is not a disease hospital infection:	n	%
1.symtoms occurred too early, ie. Not 48 hours have passed from the moment of the patient	76	82.60%
2. infection appeared within a month of surgery (where operated)	4	4.35%
3. infection appeared within one year of treatment (implanted foreign bodies, such as. Starter)	3	3.25%
4. All answers are correct	9	9.80%

Nosocomial infection is an infection that occurred in connection with the provision of healthcare services, where the patient does not remain at the time of the provision of health, the incubation period, or performed for the award health benefits within a period not longer than the longest period of incubation[6]. The correct answer on the question "In which case we say that the phenomenon is not a disease infection hospital? "82.6% (n = 76) of respondents replied" symptoms occurred too early, ie. 48 hours had passed since the acceptance of the patient. " Only 17.4% (n = 24) of respondents did not have sufficient knowledge of the subject, as evidenced by the answers given by them.

[6] Act of 05.12.2008 for preventing and fighting infections and infectious diseases in humans (OJ 294, pos. 1570).

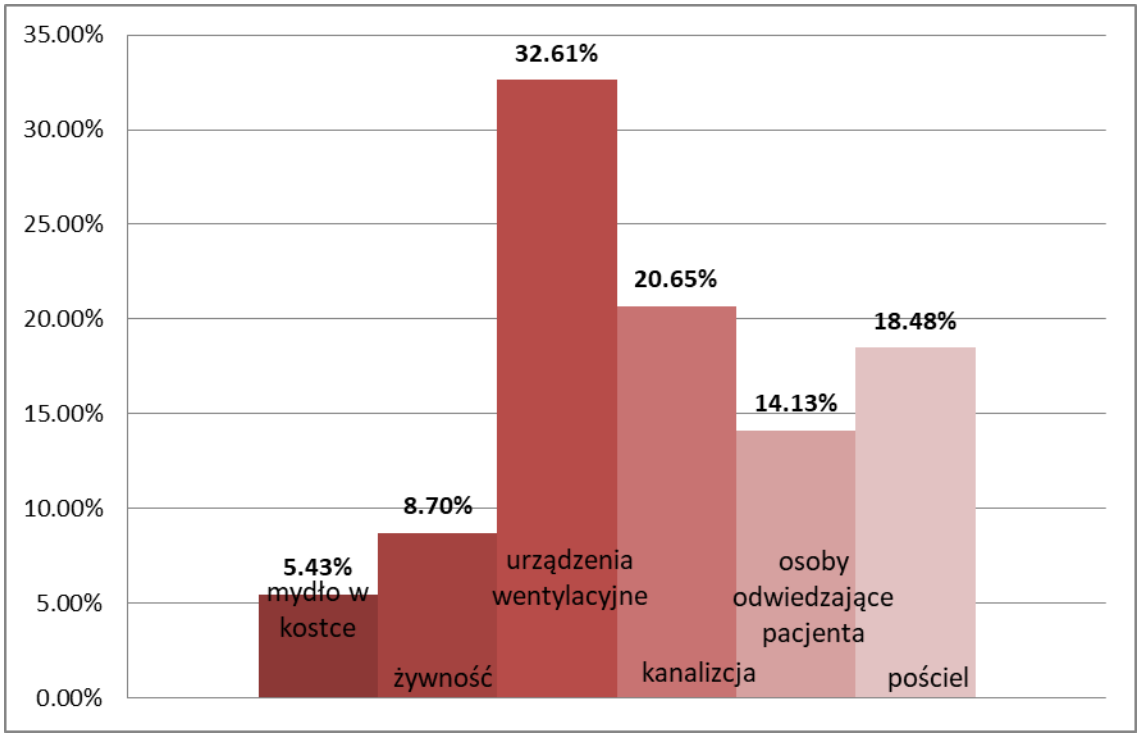

Figure 7.Select source of hospital infections?

According to the test nursing most common source of hospital-acquired infections are ventilation systems 32.61% (n = 30) and the sewer 20.65% (n = 19). The least frequent response was the response of choice "soap bar" - only 5 people indicated that answer.

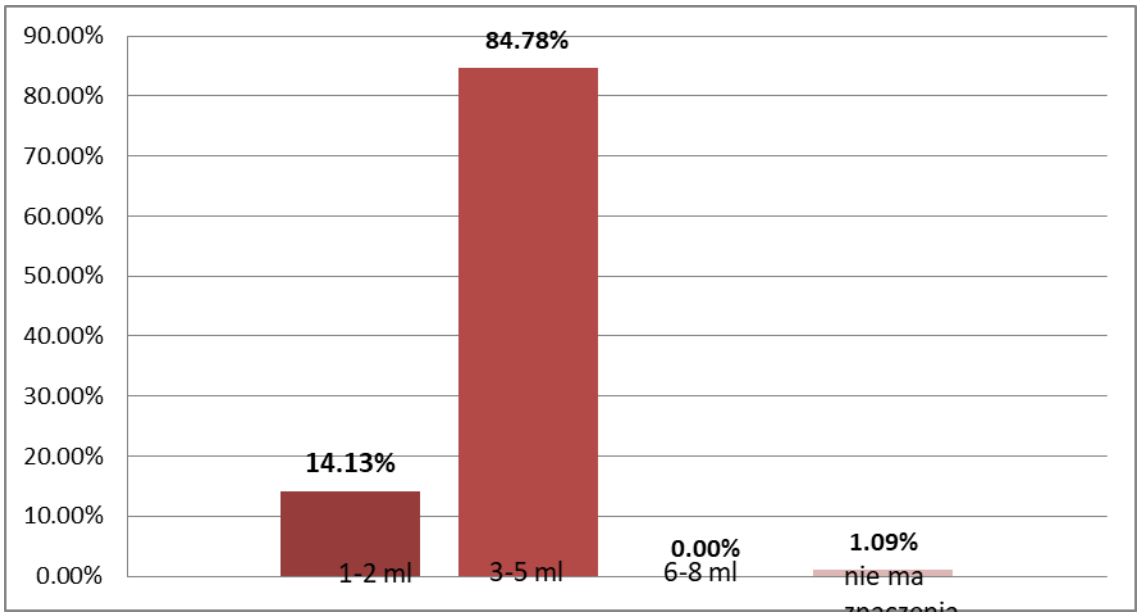

Figure 8. What should be the correct amount of product applied on the hands to disinfect hands?

The correct amount of formulation applied to the hands for disinfection of hands in accordance with the standard EN 1500 is between 3-5 ml of the formulation 84.78% (n = 78) of respondents granted such response.

Table 8. In what situation do not need to establish non-sterile gloves?

In what situation you do not need to establish non-sterile gloves?	n	%
1.feeding patient	10	10.87%
2. patient transport	8	8.69%
3.perfusion infusion fluid without exchanging apparatus for infusion drip	10	10.87%
4. all answers are correct	64	69.57%

To the question "In what situation do not need to establish non-sterile gloves?". Most people studied target group indicated that all the answers are correct, only 8.69% (n = 8) indicated the answer that it is the transport of the patient.

Table 9. In the case of occupational exposure to be in the first place:

In the case of occupational exposure to be in the first place:	n	%
1. disinfect hands	13	14.13%
2. squeeze blood from the point of interruption of tissues	12	13.04%
3. wash your hands with antibacterial soap	66	71.74%
4. seal the place to break the continuity of tissues sterile dressing	1	1.09%

For the exposure, which poses the risk of infection is considered to stabbing or injury to healthy skin contaminated sharp object, for example. Needle, a scalpel, a lancet, drill, etc., Or contact mucosal or damaged skin, for example. Cracks, abrasions, inflammation, wounds, burns, allergic changes oozing potentially infectious blood, tissues and / or bodily fluids of a patient. Occupational exposure, in turn, is in contact with potentially infectious material, which occurred during the performance of work[7]. In the case of occupational exposure to be in the first place? The most common response by the test indicated the nursing staff was the answer: "Wash your

[7] Boyce J, Pittet D. Guideline for hand hygiene in healthcare settings: Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HICPAC / SHEA / APIC / IDSA Hand Hygiene Task Force. Am J Infect Control 2002 30: S1-S46

hands with antibacterial soap." The option chosen 71,74% (66) of the respondents. Only one person has indicated the answer ". Seal place to break the continuity of tissues sterile dressing."

Table 10. Do you know that Mr. / Ms is about the importance of washing hands in the spread of nosocomial infections, is it?

Do you know that Mr / Ms is about the importance of washing hands in the spread of nosocomial infections, it is:	n	%
1.very good	23	25.00%
2. good	49	53.26%
3. sufficient	20	21.74%
4. inadequate	0	0,00%

The nursing staff during the survey was asked about the subjective evaluation of their knowledge of the importance of hand washing in the spread of hospital infections. More than half from the respondents as much as 53.26% (n = 49) assesses their knowledge of good, only 21.74% (n = 20) puts its expertise at the level sufficient. None of the people did not assess their knowledge level insufficient.

Table 11. Do you know that the Lord / Lady has on the prevention of nosocomial infections is?

Do you know that the Lord / Lady has on the prevention of nosocomial infections is:	n	%
1. very good	18	19.57%
2. good	53	57.61%
3. sufficient	20	21.73%
4. inadequate	1	1.09%

Knowledge of the prevention of nosocomial infections respondents participating in the study 53.26% (n = 53) subjectively evaluate the level of "good", only one person admitted that the state of knowledge about the prevention of infections is inadequate.

Table 12. Do you think / you there is a need to organize training courses for the prevention of infection in the workplace?

Is the Mr / Mrs is necessary to organize training for the prevention of infection in the workplace?	n	%
1. there yes	78	84.78%
2. there is no need	2	2.17%
3. I do not know	11	11.96%
4. my knowledge is sufficient on this topic	1	1.09%

Respondents asked about the need to provide training for the prevention of infection in the workplace 84.78% (n = 78) answered that there is a need for only one person stated that there is no need, because her knowledge is sufficient.

Table 13. How won and Mr. / Ms knowledge about the importance of washing hands in the spread of hospital infections?

How you won and Mr. / Ms knowledge about the importance of washing hands in the spread of hospital infections?	n	%
1.self-education	28	30.43%
2. in the course of vocational training in school	20	21.74%
3. intra-departmental courses in the workplace	36	39.13%
4. in the system of postgraduate education	8	8.70%

How you won / and Mr. / Ms knowledge about the importance of washing hands in the spread of hospital infections? The answers were quite strongly divided. 39.13% (n = 36) gained knowledge of the courses intra-departmental, 30.43% (n = 28) during the self-learning. The surprising, yet disturbing fact is that during the course of vocational training in school and during the post-graduate education theoretical knowledge on basic theory in the field of infections is inadequate, as evidenced by the percentage distribution of responses.

Discussion

The level of knowledge in the filed of infections associated with health care is a very important element affecting the health and lives of patients and the medical staff working[8]. In the various stages of the nursing process, which consists of diagnosis, planning, implementation and evaluation, there is the problem of hospital infections[9]. A very important fact, having great importance for the prevention of infections is to maintain high personal hygiene among medical staff[10]. The existing hospital procedures for hygiene, disinfection, aseptic techniques, the organization of work must be well known, understood and implemented in accordance with the applicable knowledge and skills of medical personnel. Infection control arising during the hospitalization of the patient is considered to be the main determinant of the quality of medical care[11]. Hour, direct nursing care for the sick, brings the need for raising the level of knowledge in the field of infections in many ways and respect basic hygiene procedures and specialized[12].

Own studies, which aimed to verify the level of knowledge of nurses on hospital infections are unsatisfactory. They point to different levels of knowledge of individual nurses. A disturbing fact is that only 64.13% (n = 59) of those participating in the survey answered that direct contact, usually by hand during the performed treatments and medicines is a source of spread of infection in the hospital environment. Similar test results obtained Garus and co. in his paper[13]. According to their studies up to 53.2% of nurses do not know that bacterial flora, which temporarily colonizes the skin of the hand is responsible for the majority of infections associated with health care. It is elementary, and one of the most important principles of prevention of nosocomial infections. Hand hygiene behavior of the methods and techniques of washing is the best method of prevention of transmission of microorganisms. Own research pay particular attention to the lack of knowledge of nursing staff in case of joining an undesirable event which is exposure. In own research only 71.74% (n = 66) of those surveyed in the event of an adverse event would be able to react. In the case of exposures remaining 30% of the staff there would be able to help yourself or a collaborator. The test results showed that the knowledge of nurses on hospital infections it is enough diverse. In our study, objective assessment of the level of knowledge about the infection checked by means of questions is much lower than a subjective assessment. In our study up 53.26% (n = 53) nurses subjectively assess their knowledge of

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"good", only one person admitted that the state of knowledge about the prevention of infections is inadequate. In studies Garus and co. Nurses found their own knowledge of nosocomial infections and their prevention rather high[14]. As many as 74.8% of nurses considered their knowledge at a very good or good, and only 2.7% of respondents rated rather poorly.

The nursing staff is part of the therapeutic team, which is in direct contact with the patient. It is extremely important that all nurses possess the knowledge of infections. It is also important that a sufficient level of knowledge possessed well as patients, whose role in the prevention of hospital infections complement of the entire medical staff. This could affect the reduction in the incidence of nosocomial infections, and increase the safety and quality of care biopsychosocial the patient in the hospital.

Conclusions

1. The level of knowledge of nursing staff is highly diversified. There is an urgent need to take all the educational, training influence to raise the level of knowledge of nurses in this area.
2. There is a need to introduce mandatory training and regular in-hospital, inside the department, which will raise the level of knowledge of nursing staff.
3. There is a need to modify the curriculum in the course of nursing education, to modify the content on hospital infection which would increase the knowledge and awareness of nursing staff.

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